THE JOURNAL

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

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THE CALL

It is fourteen years since the American Medical Association last met in Detroit. It may be fourteen years before the doctors of Michigan again have the privilege of being hosts to their great parent organization, of welcoming their brother practitioners from other states and from foreign lands. A wonderful opportunity is thus given to fraternize, to gain new knowledge, to exchange ideas and experiences, and to consider the ennobling ideals that organize us into this great force, whose real object is to develop and foster the best methods for the prevention of ills which beset mankind, and for the conquest of disease.

No physician worthy of the name can afford not to be a fellow of this great body and should always strive to help it attain the ideal goal it has set.

The great State of Michigan with its beautiful lakes, rivers and hills offers much to charm the "stranger within its gates"; but let us all unite wholeheartedly to make our visiting colleagues not only impressed with the natural beauties of our loved state with its magnificent institutions of learning, culture and industry, but infinitely more impressed with the warmth and cordiality of their reception everywhere manifest.

ROLLIN STEVENS, M. D.,
Chairman Local Committee on Arrangements,
American Medical Association.

Volume XXIX **MAY, 1930** **No. 5** [Whole No. 333]

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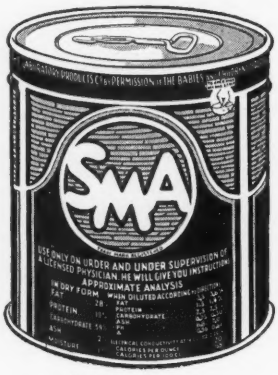

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SINUS THROMBOPHLEBITIS*

D. R. HEETDERKS, M.D.†
GRAND RAPIDS, MICHIGAN

Sinus thrombophlebitis is the most common aural complication in mastoid surgery. Pathologically two processes are recognized. The earlier stage is that of acute sinus phlebitis, which, if uninterrupted, very frequently gives rise to the formation of a thrombus at the site of the lesion. I wish to present four cases in various stages of the disease process.

Case 1. Mrs. N. D., aged 28, was referred with a chief complaint of discharging right ear associated with pain. Three weeks before the patient experienced a severe head cold. After five days the family doctor performed a myringotomy because of earache with partial relief. Some pain continued and she had definite chills for several nights prior to entrance. Temperature was up around 104 at times and she experienced annoying vertigo. Examination showed the facies to be septic. There was redness and edema over the right mastoid region, which was extremely tender. The external canal was filled with frank pus. There was definite bulging of Shrapnell's membrane as well as the superior canal wall. Kernig's sign was negative, and there was no rigidity of the neck. The temperature was 103.5. Urinalysis was essentially negative, leukocytes numbered 18,000. The roentgenogram showed some breaking down of the cell walls. A diagnosis was made of acute suppurative otitis media with mastoiditis and sinus thrombosis. It was considered advisable to operate immediately. November 8th at time of operation the mastoid was found to be of the diploic type. All cells were filled with infected granulations and bled freely. The sinus plate appeared to be healthy, but when removed the sinus wall was found to be covered with granulations. A small incision in the sinus wall was followed by good bleeding from above and below. The next day the blood culture was positive for streptococcus viridans.

*Read before the section on Ophthalmology and Otolaryngology, 109th Annual Meeting of the Michigan State Medical Society, Jackson, Sept. 17 to 19, 1929.

†Dr. Dewey Ralph Heetderks, Otolaryngologist, attended the University of Michigan at Ann Arbor. Received the degree of A.B. in 1918 and M.D. in 1922. Was interne at Blodgett Memorial Hospital in Grand Rapids, Michigan, from June, 1922 to 1923. Served a Fellowship at the Mayo Clinic for four years in Otolaryngology, plastic surgery of the head, and broncho-esophagoscopy. Received degree Master of Science in Otolaryngology in 1927 from University of Minnesota graduate school. Member of American Board of Otolaryngology. Fellow of the American College of Surgeons. Consulting Otolaryngologist at St. Mary's Hospital, Grand Rapids, Mich.

Case 2. L. P., a boy aged 6, entered with chief complaint of swelling in the region of the right mastoid and discharge from the right ear. Three weeks previous he had a severe upper respiratory infection. After a few days the right ear began to ache and the next day ruptured spontaneously. For two days prior to examination the patient had experienced severe pain back of the right ear followed by swelling, increased temperature and chills. Examination revealed profuse purulent discharge in the right canal. The ear drum was bulging with associated drooping of the superior canal wall. There was marked tenderness over the tip and emissary region, less over all the right side of the head. Fundi were negative. Leukocytes numbered 16,000. The roentgenogram showed definte decalcification of part of the sinus plate. A diagnosis was made of acute suppurative otitis media on the right with mastoiditis and sinus phlebitis. February 26th (two days following examination) a complete mastoidectomy was

Case 1, Mrs. N. D. aged 28

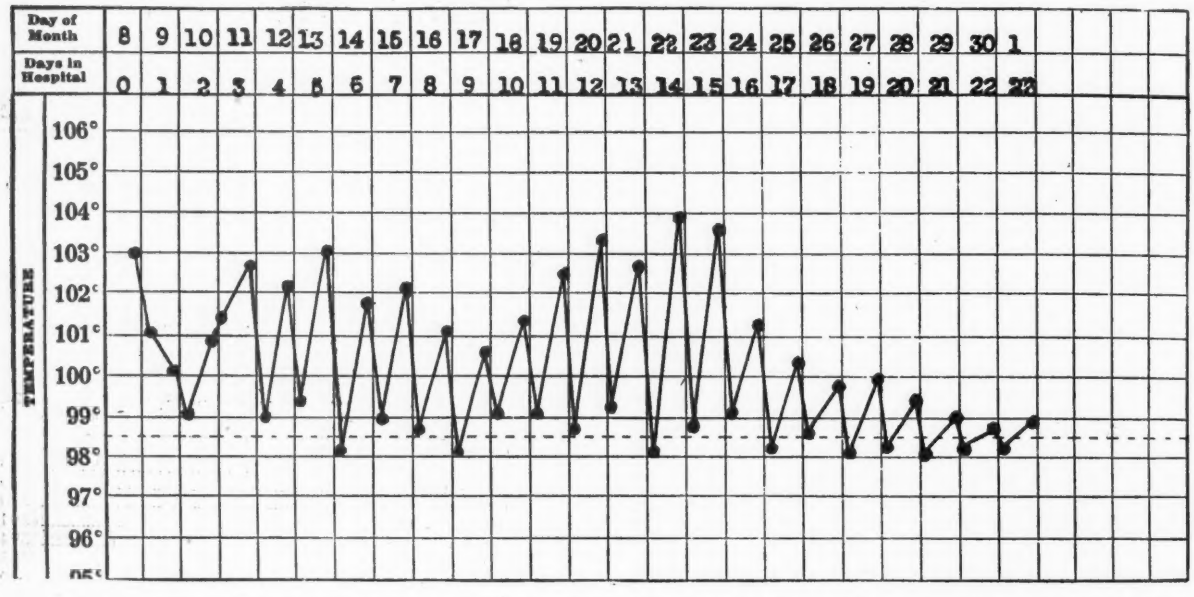

Fig. 1. Case 1. Postoperative course: First day, much improved. Next few days temperature was septic but no chills; leukocytes 21,000. Fifth day, temperature 103 and chills. Exposure of wound showed sinus wall pulsating as though patent. Seventh day, internal jugular ligation and sinus ablation, blood culture then became negative, some reduction in leukocytes, but temperature very septic. General examination showed no other cause for temperature elevation. Fifteenth day: Blood transfusion done by citrate method. Following this there was a rapid convalescence.

Case 2. L. P. a boy age 6

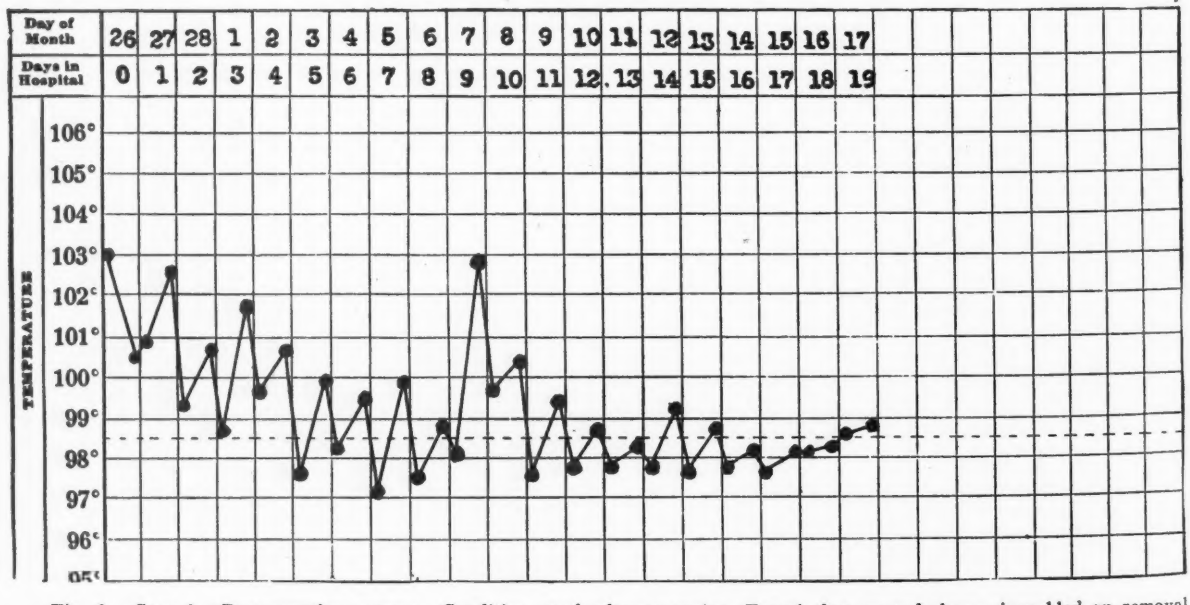

Fig. 2. Case 2. Postoperative course: Condition good after operation. Fourth day, wound clean, sinus bled on removal of middle pack. Repacked. Ninth day, sharp rise in temperature following removal of all packs. Leukocytes 10,500.

performed. On uncovering the cortex the mastoid cells were found to be bleeding. The mastoid was of the diploic type. The zygomatic cells were filled with infected granulation tissue. A large amount of pus welled up from below the knee of the sinus knee, until normal dura was revealed. After tamponing under the bone edges, the sinus was incised and a definite mural thrombus encountered. Bleeding from both ends was free. Packs were inserted to ablate the sinus. Jugular ligation was considered,

Case 3, Mrs. P. S. aged 45.

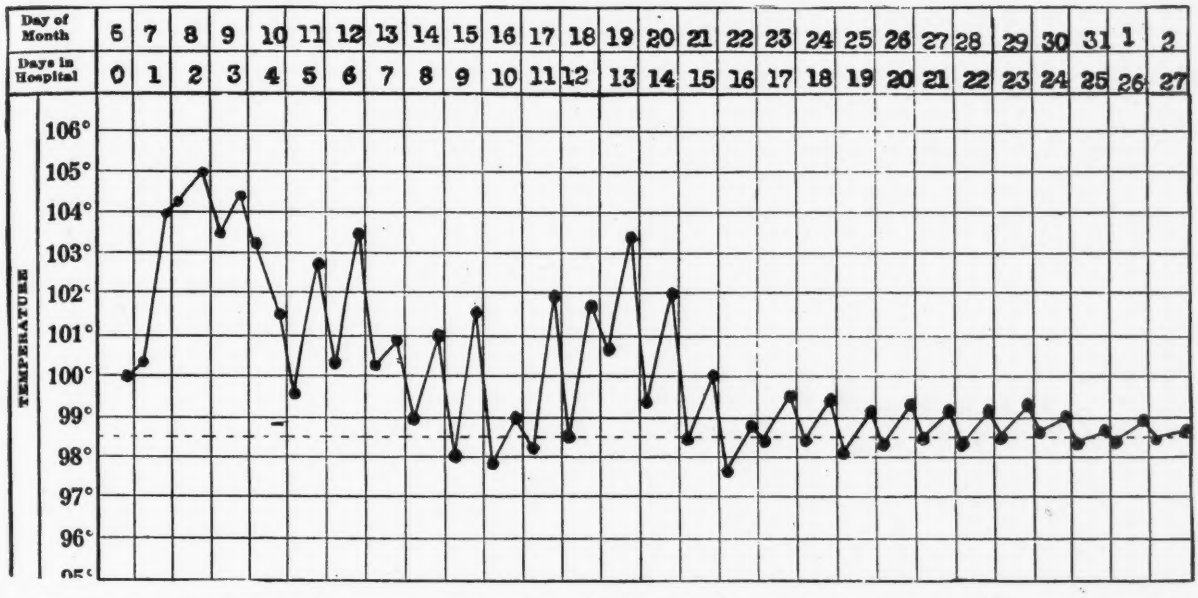

Fig. 3. Case 3. Postoperative course: First and second days, steady rise in temperature. All sutures removed, wound found to be in good condition; white count dropped to 13,800. Sixth day, patient began to feel chilly and drowsy. Seventh day, blood culture showed no growth, leukocytes 14,400. Ninth day, sigmoid sinus uncovered and found gangrenous, uncovered toward torcular, free bleeding encountered. No bleeding from bulbar end; jugular vein ligated above facial. Twelfth day, blood typed and transfusion considered. Fifteenth day, spontaneous perforation of left membrana tympana. From then on there was definite improvement.

Case 4, L. J. a boy age 5

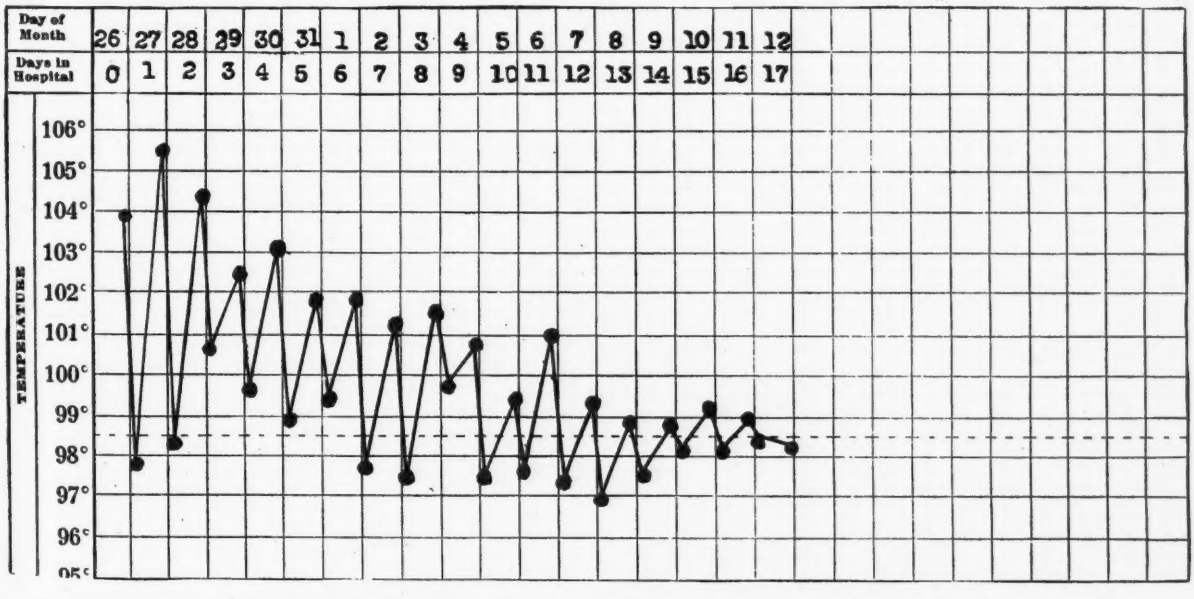

Fig. 4. Case 4. March 26, entered hospital. Transfused same day with 250 c.c. of citrated blood. March 28, operation was performed. Right side found normal. Left lateral sinus thrombosed and free pus in jugular bulb. Sinus ablated. Left internal jugular vein ligated above facial. Temperature gradually returned to normal.

which had been exposed by the disease process. The exposed part of the sinus wall was greyish and thickened by granulations. The sinus was surgically further uncovered toward the bulb and back over the but because of the patient's general good condition it was felt the operation could be delayed to await any further developments.

Case 3. Mrs. P. S., aged 45, was first seen at home

because of earache on the right of eight hours standing. Myringotomy was performed with release of aqueous discharge. The patient was kept under observation and progressed very satisfactorily until three and one-half weeks after the onset. Then she developed fever of 102 and very definite mastoid tenderness, but no chills. There was only a small amount of discharge in the external canal. Erythrocytes numbered 4,200,000, leukocytes 16,300 and 82% polymorphonuclears. A diagnosis was made of acute suppurative otitis media with mastoiditis on the right. Jan. 6 (date of examination) a complete mastoidectomy was done on the affected side. The mastoid was of the pneumatic type. The cells were filled with infected granulation tissue and a small amount of free pus welled up from the region of the tip. The sinus plate was firm and was not uncovered because the pathological process in the mastoid was considered sufficient cause for the symptoms. After the first few days the patient's general condition grew worse. In spite of this the number of leukocytes dropped from 16,300 to 13,800. On the 9th day because of peculiar mental reaction at times, septic appearance, and profuse perspiration at night, the sigmoid sinus was uncovered and found to be gangrenous. Blood culture was negative. After the 17th day there was definite improvement and the patient was dismissed from the hospital February 2nd. Convalescence was protracted. The symptoms gradually disappeared, possibly as a result of canalization of any remaining thrombus.

Case 4. L. J., a boy aged 5, was referred because of discharging ears, discharging mastoid wounds and extreme weakness. In the middle of February the child had measles and five days after the onset of the disease pain developed in both ears. Four days later the left ear began to discharge and the following day the right ear. There was considerable pain in both mastoid areas and a continuous high temperature. After three weeks the child was taken to the hospital and a bilateral mastoid operation performed. Following this there was a daily rise in temperature, at one time as high as 106.4. There were but two chills. Examination at this time, March 24th (i.e. five weeks after onset) showed the boy to be very anemic and emaciated. He had bilateral discharging ears, bilateral open mastoid wounds and enlarged glands in either cervical region, more on the left. Crow's sign was negative. There was slight swelling in the left lateral wall of the pharynx. Further physical examination was negative, and blood count showed only slight change; 3,500,000 erythrocytes, 13,600 leukocytes. Blood culture made at this time contained staphylococci. March 26th, two days after examination, the boy was sent to the hospital and transfused with 250 c.c. of citrated blood with no effect on the temperature, although there was some improvement in the patient's general appearance. A diagnosis was made of sinus phlebitis on the left and possibly on the right. The diagnosis was phlebitis in preference to thrombosis because the patient did not have the usual septic appearance. March 28th operation was performed. The right internal jugular vein and the right lateral sinus were found to be normal. The left lateral sinus was thrombosed and there was free pus in the jugular bulb. The sinus was ablated. The left internal jugular vein was found to be thrombosed and was ligated and divided above the facial vein (which was below the thrombosed area). At operation the blood culture was negative. The boy's temperature gradually returned to normal and remained so. Wounds healed nicely.

Either or both sides might have been involved in this case. It was thought the left side was involved because of the enlargement in the left pharynx and the greater external glandular involvement.

DISCUSSION

Dr. J. M. Robb (Detroit): Dr. Heetderks' paper presents many points of interest. I was gratified to hear him speak of the Schwartze operation as a complete mastoidectomy instead of a simple mastoid operation. Is there such a thing as a simple mastoid? I doubt it. The statement to the patient or relatives that one is going to do a simple mastoid is usually very misleading and extremely difficult to explain when complications arise. Mastoids are serious problems and their complete healing brings a feeling of relief to the experienced surgeon.

I was impressed to hear the doctor depend mostly upon repeated findings to determine sepsis, just as Dr. Parker Heath suggested "dusting off the perimeter and making repeated examinations with a familiar test."

The finding of a cord-like mass in the neck has been of no use to me in diagnosis. I suspect it has little value.

Spinal manometric readings have value, but are not always easily accomplished.

I know there are difficulties in diagnosis of sinus thrombosis, although Dr. Heetderks does not seem to have had much in these cases. He must analyze the situation carefully before operating. With me, however thoroughly the case has been investigated, I occasionally discover at operation such conditions as extradural abscess, perisinus abscess, and sinus thrombosis.

In sinus thrombosis, we are dealing with a superimposed infection—the first infection being, perhaps, influenza or scarlet fever; the second infection, mastoid disease; the third, infective thrombophlebitis. Anyone, I believe, will agree that this problem is difficult of analysis.

The pathologist helps us only occasionally because, so far as he is concerned, sepsis means finding bacteria in the blood stream, and, unfortunately, the peripheral veins from which the culture is taken may show none when the blood of the lateral sinus may show plenty, to account for the clinical findings. Clinically, sepsis may mean anything from a lowgrade prolonged process, with almost no symptoms, to a condition with appalling symptoms, and prompt exitus.

Sinus thrombosis is a defensive mechanism on the part of the individual. Nature is throwing out a wall against the spread of infection and it is not until this wall or clot begins to break down and disseminate that the symptoms present.

On the average we determine the most of our diagnosis on the illness of the patient. The chief indication is a swinging temperature, with a rise and fall of two or three degrees which has appeared, usually, rather rapidly, but, at times, most insidiously, and of slow development. Previously, I mentioned sinus thrombosis as a defensive mechanism, in which a barrier has been established across the sinus. I have operated such patients later and found the obliterated sinus. In one old gentlemen, who rather late in the healing process developed the symptoms of a localized meningitis, I exposed the temporosphenoidal lobe and found the pathology. Although there had been signs of the characteristic sepsis of sinus thrombosis, the consultant and I agreed that the sinus should be exposed. The investigation showed a completely obliterated sinus of moderately recent pathology, undoubtedly established at the onset of the mastoid infection.

I have eight known cases of sinus thrombosis in eleven hundred mastoid operations.

I am still in doubt as to how to proceed when dealing with a suspicious lateral sinus infection. Shall we tie the jugular vein and open the lateral

sinus afterward, or shall we reverse the procedure? I, ordinarily, proceed by investigating and opening the lateral sinus first.

Another problem that presents is, shall we resect or simply tie off the jugular vein? This is equally difficult to determine. One occasionally has a severe cellulitis of the neck following surgical attack on the jugular vein. In one case, while manipulating the vein, it separated from the jugular bulb. I never had a more perfect healing of the neck wound. The next time I had a case of this severe type, in which the vein was gray, I just pulled the vein loose and had the same result. I do not believe it is good practice if the vein is healthy, but certainly if you have a degenerated vein, resect it, pull it loose from the jugular bulb, and throw it away. Your results in this particular type of case will be much better.

Dr. Robert Sonnenschein (Chicago): I will say this—I do not know of any subject where opinions differ so much as on this, in regard to diagnosis and procedure. So many cases have lateral sinus involvement, with the sinus absent, or the wall covered with granulation; so many cases have so few symptoms, that you are surprised when you reach the sinus. I was called in to see a man 42 years of age. At the time I was consulted he was under the care of a very excellent otolaryngologist and internist. About two or three weeks prior to that time he had had a cold in the head, pain in the ear. In about ten days he was feeling quite well, then he began to have pain in the mastoid and slight temperature and slight tenderness over the antrum region. I believe it is a good idea to have X-rays taken before operation—Dr. Pierce has called attention to the fact that cases with the symptoms of ordinary mastoiditis may develop a full fledged mastoid very suddenly. Our patient was well and did not look septic, the white blood count was 10,000. Owing to the fact that he had this recurrence after the first subsidence, we felt we should go in and operate at once, which was done. We found very large cells, the posterior sinus plate was perfectly smooth and hard. We did not disturb it because there were no symptoms, and the headache was gone one hour after operation. We gave him ethylene gas. He was sitting up in bed after the operation. The next day the temperature began to rise —101 and gradually rose to 105 by evening. It is a characteristic often of sinus thrombosis that the patient feels very well. There is no reason for pain, because pain is present only with pressure. This man had a good appetite. The leukocyte count was 12,000. The temperature stayed at 105 to 104 and never dropped to normal in forty-eight hours. We had a blood culture made—you cannot go by a blood culture, and in this case it never was positive. He simply had a temperature. The pulse was very slow, 96, no headache; so we did not assume that there was any intracranial pressure. He looked very well. We thought it might be a parasinusoidal abscess developing, which is not uncommon. He looked worse at the end of seventy-two hours and we decided to operate. I believe in looking at the sinus first—I know some men tie off the jugular but I prefer to see what the sinus looks like first. I made a long incision and got no bleeding, then went up backward, pulled the sinus out and got bleeding, then went down to the jugular bulb and got no bleeding, tied off the jugular and saw a small thrombus right into the lumen of the sinus. The man was dead in thirty-six hours of the most terrific sepsis I ever saw. There had been no real signs of definite sepsis before, as I said.

RECENT OBSERVATIONS IN THE PATHOLOGY OF NASAL SINUSES*

CARL G. WENCKE, M.D.†
BATTLE CREEK, MICHIGAN

To discuss this topic comprehensively would require so much time that it would become tedious, so I will confine by observations to the inflammatory pathology. It may seem presumptuous for me to discuss this subject when we all have listened to, or read, papers by our pathfinders: Hajek, Uffenorde, Skillern. But our experience at the clinic at Battle Creek during the last ten years has changed so radically that I venture to bring it up here hoping that your discussion will help to clarify it.

This process involves primarily the mucous membrane, which is normally composed of a layer of stratified ciliated columnar epithelium on a loose fibrous layer in which are situated the mucous glands, blood vessels and lymph spaces. In its deepest part it becomes compact and contains more spindle-cells and takes the place of the periosteum. Most inflammatory processes in the nasal sinuses have as their pathological factor some bacterial invasion, How this takes place is still a problem that we discuss in theory, one of the recent being Wright electrolysis of the lipoproteid film covering the epithelial layer. We have always been taught that this bacterial entry brings about an acute congestion. There is first a dilatation of the blood vessels with an increased flow of the blood. This is followed by complete dilatation and stagnation of the blood stream. In this period there

*Read before the section on Otolaryngology, Michigan State Medical Society, Jackson, Michigan, Sept. 17-19, 1929.

†Dr. Carl G. Wencke, M.D., graduated from the University of Illinois in 1914. He has been associated with the Battle Creek Sanitarium ever since, with the exception of the time spent in post-graduate work and in the army; post-graduate work at the University of Illinois, one year at the University of Pennsylvania, and six months at the University of Vienna; two years and five months as captain in the United States Army Medical Corps, associated with the ambulance service; practice limited to ear, nose and throat for the last thirteen years.

is a transudation of blood serum and the migration of the cellular elements. It is the variation in the serous or cellular factors of this process that makes the difference in the pathology observed.

ACUTE EMPYEMA

In the acute suppurative type the cellular elements predominate. There is some exudate of serum but the microscopic picture is one of marked cellular infiltration. There is such an active migration of the polymorphonuclear cells that they work out into the sinus cavity and there appear as pus cells. At first the goblet-cells and mucous glands secrete very little and the content of the cavity is a serous pus. Soon there is a hypersecretion, and the character of the discharge becomes mucopurulent. There is such a marked dilatation of the blood vessels that small interstitial hemorrhages occur. The epithelium is intact and infiltrated with leukocytes.

ACUTE CATARRHAL OR SEROUS INFLAMMATION

In this condition the transudation of serum into the loose areolar tissue of the submucosa predominates, so much so that there is marked thickening of the mucosa to such an extent that in the smaller sinuses they may be filled completely with some of the edematous membrane forced through the ostium, forming a polypus. Again, the interspaces may be dilated to such an extent that mesothelial cysts are formed. I am sure some of you have seen patients who, in the course of a severe acute rhinitis, showed evidence of edematous swelling in the middle meatus which receded as the inflammation subsided. Of course there is cellular infiltration in these cases, but this is overshadowed by the edema. The epithelium is apparently intact throughout. No bacteria in the mucosa have been demonstrated. The secretion in the sinus is mucus or mucus mixed with serum.

Why there should be the two types of reaction to what is apparently the same etiological cause is still an unsettled problem, which we will not attempt to answer.

Most of our work at the clinic has to do with patients who come to us for some chronic ailment, and therefore we see the chronic pathology in the great majority of our patients. Possibly it is for this reason that some of our findings differ from those of other observers.

CHRONIC SUPPURATIVE INFLAMMATION

Hajek describes three types. We will consider two of them at this time, and the other we will take up specially.

(1) Papillary or Infiltrating:

In these cases the mucosa is thickened to a marked degree. The surface is distinctly papillary in structure. There is a hyperplasia of the epithelium, which is shown by the multilayered ciliated epithelium. Sometimes a metaplasia is found of the epithelium. There is a very marked cellular infiltration, especially in the subepithelial layers; but it extends to periosteal depths. There is a marked hyperplasia of the blood vessels. There is a lesser degree of hyperplasia in the connective tissue. The above microscopic finding can be seen macroscopically at the time of surgical interference. The mucosa looks rough, sometimes polypoid. On the least trauma it bleeds profusely; on removal it tears easily and is hard to free from the bone. Frequently small plaques of bone have been laid on the original osseous wall due to stimulative irritation of the periosteal layer. I recently had a case in which all of these findings were present, even the lack of fibrous hyperplasia in a case where, to our knowledge, this pathology existed over four years.

(2) Fibrous:

This type is similar to the papillary with the exception that there is greater hyperplasia of the connective tissue cells; possibly because of this, the mucosa is not so thick. The marked cellular infiltration is present. The circulation is increased, but not to such a degree. Again, there is a hyperplasia of the epithelium and also of the osteoblasts of the periosteal layer. In this condition when one attempts to remove the mucosa, while it is loosened with difficulty, it will usually come off in one piece.

In both of these types the surface of the mucosa is covered with a secretion composed of dead leukocytes in mucus, and the cavity is filled with mucopurulent material. Under poor drainage this may break down and a flaky pus is present.

Where this pathology is found, one sinus alone may be involved. The frequency of involvement of the different sinuses, even

to a pansinusitis, we have found about the same as all other observers.

In these two types it is evident that there is a very active reaction locally of the tissues to the bacterial invasion. There is such associated pathology that can be caused by direct extension and irritation of the infection and secretion. The mucosa of the nose over which the secretion runs shows a hyperplasia. There is enlargement of the posterior ends of the inferior turbinates if any of the anterior series are involved, and of the middle turbinate and back of septum if the posterior ones are the source. In the pharynx the lymphoid tissue is usually hypertrophied. In the lower respiratory tract there may be either a superficial irritative bronchitis or the more extensive process of bronchiectasis. But since there is very little absorption from an intact sinus mucosa, the different forms of general pathology are not often seen.

Also, because of this decided reaction to the infection, these cases resolve by some form of treatment which gives an increased drainage and aeration, whether only a puncture and irrigation are necessary, or one has to resort to one of the more radical procedures.

CHRONIC SEROUS INFLAMMATION

Some of the writers call this catarrhal, but the most frequent terminology heard lately is hyperplastic sinusitis. But when you read what is given as the pathology, you readily see that they are all describing the same condition. In this condition the outstanding picture is that of edematous swelling of the mucosa. Hajek does not attempt to classify, but some of the more recent men suggest, as Ball does, that there are four types: (1) Edema; (2) fibrosis; (3) glandular hyperplasia or atrophy; (4) leukocytic reaction. Ryder does not attempt to classify, but states "the elements of this vary."

(1) Edema:

In this the transudate of serum is greatest. This type is often seen with its large soft polypi extending out into the nose. But since the use of iodized oil, we have seen cases of these that had no intranasal evidence of the edema. The X-ray study following iodized oil injection or suffusion suggested unevenly thickened membrane or polypi in one or more of the sinuses, which was subsequently proven at the time of surgical interference. Again, only a localized filling defect was found, which turned out to be a mesothelial cyst. Microscopic examination shows a marked transudate into the interspaces with a small amount of cellular infiltration which is mostly of the mononuclear cells. There is very little increase in the blood vessels. Macroscopically there is either polypi or general thickening of the mucosa. This usually is removed with very little difficulty, although it tears very easily because of the small amount of connective tissue. There is practically no bleeding on removal.

(2) Fibrous type:

Here there is a hyperplasia of the connective tissue and therefore there is, as a rule, less thickening of the mucosa, but we all have seen cases where there were definite polypi both in and out of the sinus that had a definite connective tissue stroma. Here again with the aid of the iodized oil we have been able to diagnose cases where the ordinary X-ray examination was practically negative, and at the time of surgical interference showed an unevenly thickened membrane of a yellowish color and smooth surface. There are, at times, some small polypi or polypoid elevations. This membrane also can be removed with ease and comes off in one piece. In one instance, while doing an ethmoidectomy, and after enlarging the frontal canal, the membrane was grasped with a forceps and with gentle traction the entire mucosa was removed from a moderately large frontal sinus.

(3) Glandular hyperplasia:

In this there is an increase in the mucus glands and goblet-cells. Therefore, there is a greater thickening of the mucosa near the ostium of the sinus since the greater number of glands are found here which can be seen, especially in the maxillary sinus. There may be retention cysts. While in all the above the secretion in the sinus is mucus, it is especially true of this type. At times it is so gelatinous and tenacious that it is removed with difficulty when irrigation is attempted. In all the above types of serous inflammation there has been practically no activity of the osteoblasts.

(4) Chronic inflammation with leukocytic reaction:

Hajek describes this under suppurative inflammation. Ball makes it one of the

types of serous inflammation. Emerson calls this chronic sinusitis with thickened membrane undergoing degenerative changes. This condition seems to be a mixture of the two main types of inflammation. Which is the original process, or if they develop simultaneously, I cannot say, because the cases we see are usually well advanced. Here there seems to be a mixture of all the types. Microscopically there is hyperplasia, metaplasia, and degeneration of the mucosa. Ryder states "the surface epithelium shows some irregular erosions." The submucosa shows a marked dilatation of the areolar interspaces, with the serous transudate in some places, and in others the connective tissue hyperplasia predominates. In the same sinus both may be present or one or the other may be more evident. There is an increase in the blood vessels. The glandular hyperplasia, as a rule, is not marked. There frequently is found a hyperplasia of the periosteum. There is a marked cellular infiltration; not as much as in the papillary or fibrous suppurative types, but more than in any other of the serous types. But these cells are mostly of the mononuclear types. Ryder has shown tissue necrosis, and Ball has found definite abscess formation with surrounding cellular infiltration and fibrosis.

It is difficult to demonstrate the bacteria. Ryder says "the organisms most commonly found are streptococci, pneumococci, staphylococci, micrococcus catarrhalis and Pfeiffer bacillus." Emerson states that the infection penetrates deeply.

Macroscopically the diseased mucous membrane shows a definite thickening which may be even throughout or there may be polypi. Occasionally we have observed definite ulceration. It has a yellowish pink color in which definite yellow spots appear. Abscesses from fine pinpoint to the size of a pea have been observed. Subperiosteal abscesses have been observed, and at these points there is usually some osteitis shown by the roughened bone. Other places there have been plaques of bone laid on the bony wall. The membrane, as a rule, is not torn very easily. There may be some mucous cysts, but these are rarely observed.

Concerning the frequency with which the different sinuses are involved we are unable to say, as most of our cases are of long standing, but our study has shown us that we can use the maxillary as the gauge of the involvement of the other sinuses of the anterior series. If we have decided the maxillary needs surgical interference, and it proves we were justified, we always explore the ethmoid region. With the posterior series we either study with the help of the iodized oil or depend upon the nasal pathology. The associated nasal pathology may be only a moderate amount of hyperplasia in the usual places caused by irritation, but usually there are polypi.

As to the general pathology that may result from this condition, our clinicians are beginning to believe that anything that can be caused by a focal infection may find its origin in this type of sinus pathology.

Since in this condition there is a definite invasion of the sinus mucosa, and we find degenerative changes such as abscess formation, this type of sinusitis does not tend to heal or the mucosa to regenerate by the usual methods of drainage and aeration, and only complete removal of the diseased membrane will help these patients locally and generally.

I will close my remarks with a statement and a question. Up to approximately ten years ago the great majority of our chronic sinuses were of the suppurative type, and irrigation and aeration was our prevailing type of therapy; now the tables have turned, and we rarely see the true suppurative type, and we are kept busy with the care of these serous inflammations with leukocytic reaction. Is it because our methods of diagnosis are better, which I do not believe is wholly responsible, or is there a definite change in the pathology of the sinuses?

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PERFORATING INJURIES OF THE EYE BY SMALL STEEL FRAGMENTS*

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My audience may wonder how I should expect to extract anything of particular interest from a subject that has amassed such a voluminous literature and whose every angle has been searched and commented upon.

My answer is that in this state, through the development largely of the automobile and accessory industries not only in the larger cities but in most of the smaller towns, ophthalmologists have had unusual opportunities for observing injuries of the eye by steel fragments and might be expected to have accumulated, in the course of twenty-five years, experiences in caring for these injuries that would be worth relating.

Furthermore, inasmuch as I am limiting my subject to injuries of the eyes by small steel fragments, and chiefly to damage affecting the crystalline lens, and since the case-records at my disposal are sufficiently numerous to fairly well outline the various themes that I shall present, I am hopeful that my paper will have some novel interest.

The Damage Done to the Eye in Foreign Body Injuries is Directly Proportional to the Size of the Foreign Body.

This is a general rule with exceptions. Accidents from large foreign bodies usually result from forces of considerable violence. As examples I may mention the breaking of a high-speed drill, the faulty action of a punch press, and frayed edges of punches flying from the blows of a hammer or sledge.

Injuries by large foreign bodies shatter the eyeball. Large rents of the cornea or sclera result, with extensive loss of vitreous. The lens is expelled or ruptured. The globe collapses, or, if it retains its shape, is filled with blood.

Perforating injuries of the cornea by foreign bodies of moderate size are characterized by irregular corneal wounds and emptying of the anterior chamber. The iris is prolapsed or becomes attached to the corneal wound. Tearing of the iris or ciliary body results in bleeding into the anterior chamber or vitreous. If the lens is injured, the capsule wound gapes and lens matter is soon extruded into the anterior chamber.

The most frequent cause of perforating injuries by small steel fragments is the workman striking a piece of hardened steel with a hammer. I could relate numerous incidents of superintendents, foremen and skilled mechanics regretting too late the gentle tap which in a moment of carelessness they gave to hardened steel. The use of lead and brass hammers has perhaps diminished the occurrence of such accidents, but I have seen perforating injuries follow even their use. The history of such an accident is sufficient to make the ophthalmologist undertake a most searching examination of the eye and he must indeed be very sure of his ground if he dispenses with an X-ray examination.

In injuries by small foreign bodies the corneal wound is smooth and may be so inconspicuous as to be missed easily on inspection. The anterior chamber is not evacuated. The iris may exhibit a punched-out hole or a notch in the pupillary margin. If the lens is injured the wound in the anterior capsule shows a tendency to close promptly and the lenticular opacity resulting remains partial, or, if it progresses, it does so slowly. The vitreous is often clear and the foreign body may frequently be seen in the posterior part of the globe.

INJURIES BY SMALL FOREIGN BODIES PERFORATING THE CORNEA NEAR THE LIMBUS

In going over my case records I have found ten in which a small steel fragment perforated the peripheral portion of the cornea and a review of these records seems to warrant the conclusion that where small

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foreign bodies perforate the cornea near the limbus they pass through the zonular region and leave the lens uninjured. In each of the ten cases there was a punched-out hole or slit in the iris back of the corneal wound. The pupil was round in most instances, but twice it was pear-shaped, as it was drawn slightly toward the corneal wound. While there was usually some blood in the vitreous, this did not prevent the steel fragment from being seen in four instances. Twice the foreign body was located behind the ciliary body where one would not expect it to be detected with the ophthalmoscope. In only one of the ten patients was the lens injured and in this instance a limited flame-shaped opacity developed near the equator. The steel fragments were removed by the posterior route. Following the extraction eight of the ten patients retained useful industrial vision. One had a fragment of steel in the retina and detachment eventually followed. One had an old injury with a long retained foreign body, siderosis and degenerative changes.

My records indicate that the eye does not so easily escape serious damage when foreign bodies of moderate size penetrate through this region. Evidently the zonular space between ciliary body and lens is not of sufficient width to prevent injury of these structures. Severe hemorrhage and cataract frequently result. As the wound approaches the pupillary zone of the cornea the frequency with which the lens is injured increases. However, I have two records showing the oblique penetration of foreign bodies, that cut through the iris near the pupillary margin and yet entirely missed the lens.

REMOVAL OF SMALL STEEL FRAGMENTS FROM THE LENS WITHOUT CATARACT FORMATION

I have had three patients each with a steel fragment in the lens and in each instance after the extraction of the fragment the lens remained clear except for a scar of the anterior capsule. One such case occurred in 1915, the other two within a month of each other in 1926. These three cases occurred among approximately 250 perforating injuries of the eye with retention of a foreign body. In all three instances a small foreign body perforated the pupillary zone of the cornea, the anterior capsule and lodged in the lens substance. A brief history of one case will be descriptive of the other two.

G. O., age 45, tool maker, was striking a hardened bushing with a hammer when something struck his right eye. The accident happened on February 26, 1926. The eye bothered him so little that he did not report the accident until after four days, when he noticed slight blurring of vision. I found a small crescent-shaped wound of the cornea in the pupillary area downwards and nasalwards from the center of the cornea. Almost directly back of the corneal wound there was a small wound of the anterior capsule of the lens and a small foreign body with metallic glance lay in the central portion of the lens. The lens substance surrounding the foreign body was clear except that the latter was partially covered a thing grey film. The eye was slightly injected.

Under cocaine anesthesia a fragment of steel was readily drawn by a magnet through the capsular wound into the anterior chamber. It was allowed to remain there for twenty-four hours, when it was removed through a tangential incision of the cornea. The delay in removing the foreign body from the anterior chamber was permitted in order that the capsular wound might close under the same conditions as when the steel entered the lens, namely, with a full anterior chamber. Healing was uneventful and the patient returned to work in five days on his own initiative. The vision one year later was 20/20 in each eye. Except for the small capsular wound the lens appeared clear with the plus 20 lens of the ophthalmoscope. The patient was again examined recently, that is three years after the accident, and with the slit-lamp I could detect no opacity of the lens substance. There was a small capsular opacity at the site of perforation.

Normal vision resulted for each of the other patients. The clear lens in each patient is undoubtedly the result of the prompt closure of the wound of the anterior capsule and this was favored by the small size of the foreign body. The early removal of the foreign body after the accident was also a factor in the successful results obtained. The small fragments of steel removed from the last two patients were carefully weighed at the laboratory of Parke-Davis & Co. and the weights were .4 mg. and .47 mg. Foreign bodies such as these, less than a half a milligram in weight, are minute in size.

A fourth patient with a foreign body in a clear lens was not so fortunate as the three just mentioned.

G. C., age 38, was examined the year following an injury to the right eye. There was a small scar of the pupillary zone, a scar of the anterior capsule and a metallic fragment, centrally located, in an otherwise clear lens. As the steel had been there so long and vision was still good, no attempt to remove the steel was made at that time. One month later when the patient was again seen I was surprised to find that the foreign body had moved forward to the scar in the lens capsule and that the lens was becoming opaque. Two months later the chamber was shallow, there was a small amount of lens matter in the anterior chamber, the lens was opaque, tension was plus 1 and the eye painful. Under atropine the tension returned to normal. The cataract and steel together were removed six

months later. The small fragment of steel, which had been in the lens about eighteen months, was expelled with the lens. The fragment was not attracted by a magnet until the rust coating was removed by rubbing the fragment between my fingers. A small nucleus remained, which was quickly attracted by the magnet.

I am unable to explain the change in position of the steel fragment from the central part of the lens to a point just beneath the scar in the anterior capsule. The patient worked in a large automobile plant; possibly his eye may have come into a magnetic field strong enough to have moved the foreign body.

DIFFICULTY IN REMOVING STEEL FRAGMENTS FROM THE LENS AFTER THE CAPSULAR WOUND IS HEALED

Fragments of iron or steel, embedded in the lens substance, are drawn readily by the magnet to the anterior lens capsule, but this structure is an obstacle to their passage into the anterior chamber. If the wound in the anterior lens capsule is not too tightly closed the foreign body may be drawn through it. Tight closure of the wound takes place by proliferation of the cells of the capsular epithelium and this process requires some time. In two of the cases cited, where the fragment of metal was removed from the lens without a permanent opacity resulting, the foreign body was drawn through the capsular wound without difficulty four days and nine days respectively after the date of accident. The following brief reports indicate the difficulty encountered at the anterior lens capsule and describe attempts to overcome it.

W. D., age 25, injured the right eye February 2, 1927. He was first examined on March 12, 1927, that is, after an interval of 5-6 weeks, and a small fragment of steel was seen in the lens. In the lens there was an opaque path to the foreign body. A magnet was applied to the cornea and the fragment brought to the scar of the lens capsule, but it could not be drawn through. The lens slowly became opaque and six weeks later both lens and foreign body were removed at the same time.

H. B., age 35, was examined November 14, 1926. Six weeks earlier, he had been struck in the right eye by a piece of steel. He had a lamellar cataract in each eye, apparently of congenital origin. In the posterior portion of the right lens, possibly projecting into the vitreous, there was a small metallic fragment. A posterior cortical opacity appeared to be superimposed on the lamellar cataract in this right eye. Vision of the right eye was 10/200-20/200. Vision of the left eye 20/50. A giant magnet brought the foreign body to the anterior lens capsule but it could not be pulled through. It moved so freely in the lens cortex just under the capsule that it simulated a foreign body in the anterior chamber. In fact, an opening was made in the cornea preparatory to removing the fragment from the anterior chamber before it was discovered that the fragment had not come through the lens capsule. A cystotome was introduced into the anterior chamber and a small puncture or incision made in the capsule over the foreign body, a procedure that has been suggested in such cases by Elschnig.[1, 2] It was then readily removed with the magnet. There appeared to be no further increase in the opacity nor decrease in visual acuity, which was, however, as stated, slightly less than 20/200.

C. W., vision began to fail in the right eye about July 20, 1924. The patient recalled no injury. Examination on August 4, 1924, revealed a small piece of steel in the posterior cortex of the right lens. There was considerable opacification of the lens with vision limited to seeing large objects. There was a mild iritis. Since the fragment of steel in several attempts could not be drawn through the lens capsule, this was pierced with a knife needle. The steel was then readily removed but the lens became gradually opaque; lens matter was extruded into the anterior chamber and the lens was resorbed.

R. B., age 44, was injured July 17, 1928, when a steel splinter struck the right eye. The patient was not seen by me until three weeks later, as he was treated in the first-aid department of his plant until he noticed that vision was failing. There was a scar of the anterior capsule with extension of the opacity backward a short distance into the anterior cortex. The nucleus was clear and contained a steel fragment. There was a posterior cortical opacity, red reflex partial. Visual acuity, 10/200. The patient was observed for one week and as the opacity was not increasing an attempt was made to remove the fragment. It could not, however, be drawn through the wound of the capsule. During the maneuver a sharp end of the fragment engaged the capsule at a point adjacent to the capsular wound and by repeatedly making and breaking the current, I was able to get the fragment to perforate the capsule. A second scar of the capsule resulted. The fragment was a spicule of steel about 1 by 2 mm. There was no immediate increase in the opacity and five weeks after the operation vision had increased from 10/200 to 20/200. Three weeks later a definite increase in the opacity was noted. The anterior cortex had a silky sheen throughout and the posterior cortex was more opaque. Vision was 4/200. His condition was the same when last examined about two months ago.

O. L., age 34, was injured in the right eye by a flying piece of steel, on April 19, 1929. A serious injury was not recognized at the first-aid station in his plant until after several weeks, when vision began to fail. On examination, I found a scar in the pupillary zone of the cornea, and a small fragment of steel in the lens cortex. Cataract formation was advanced.

An attempt was made to draw the steel through the lens capsule but this was not successful. The foreign body appeared to have no sharp edge and it could not be made to cut through the capsule, by making and breaking the current. After repeated trials, no further procedure at the time was adopted. Some two or three weeks later, as the eye was red and irritated, another attempt was made to pull the steel through the capsule, and this time it came through without difficulty.

From the above experiences, I draw the following conclusions: If a fragment of steel lies in the lens and the opacification is not so advanced but what there is useful vision, an attempt should be made to remove the fragment as early as possible, for event-

ually through siderosis complete opacification will probably result. A strong magnet should be used when the attempt is made to draw out the steel through the wound or scar of the anterior capsule, or through the intact capsule. Repeated efforts should be made, if there is difficulty in securing the foreign body. As a final resort, the procedure recommended by Elschnig, of incising the anterior capsule, is worth while.

MAY A SMALL FOREIGN BODY OF STEEL UNDERGO COMPLETE RUSTING IN THE EYE-BALL AND THROUGH RESORPTION OF THE RUST EVENTUALLY DISAPPEAR?

This question is raised by Wagenmann in his work on "Injuries of the Eye."[3] It is of some practical importance for occasionally when clinical evidence points to a small foreign body of steel having been in the eye-ball for some time and the X-ray examination fails to show the presence of a foreign body, it has been assumed that complete rusting has occurred and the fragment resorbed.

The assumption is not justified by the negative X-ray examination alone, for not infrequently the roentgenologist fails to pick up the shadow of a very small fragment on the X-ray plate, due to its not standing out sharply from the shadows of neighboring bony structures.

Wagenmann does not give a definite answer to the proposed question. He gives several instances in which it was assumed that complete rusting had occurred, namely case-reports by Cramer, Franke, Casali, Liebermann, Gilbert and Pihl, but cites the opinion of Hirschberg, which I translate as follows: "That an iron fragment of only 5 or 10 mg. weight through rusting and solution of the rust can disappear completely, I have not yet observed, although in many cases the rusting of the entire iris shows clearly that the iron salts can be widely distributed. On the contrary I have removed fragments of iron from the eye which have doubtless been there 10, 15 or 30 years, with the magnet. In the course of many years the fragment can become so soft that any other method of removal than with the magnet, as for example with the hook or forceps, appears quite impossible. In the majority of cases the splinter remains solid, the rust hull apparently protecting it against rusting of the nucleus."

While it is my own opinion that small fragments of steel in the eye may undergo complete rusting, it is probable that this only occurs with very small particles, in fact smaller than 5 or 10 mg., the weight mentioned by Hirschberg.

In addition to the case reports cited by Wagenmann, I will add a report by H. S. Gradle,[4] who assumed the complete rusting of a fragment of steel.

The following are two brief personal case reports bearing on this question.

H. B., male, age 28, came to see me August 8, 1917, on account of redness and soreness of the left eye. He gave a history of having been struck in this eye eight years previously, supposedly by a piece of emery. Three years later he first noticed a cloud in front of this eye and a change in the color of the eye from blue to brown. Consulting an eye specialist at this time he was told that there was possibly a piece of metal in his eye and that he should have an X-ray examination. He did not follow this advice. The cloud in front of the eye became darker and darker but the eye had not pained him or been inflamed, until about two weeks before he came to me.

On examination I found a small scar of the cornea situated about an eighth of an inch from the limbus at the ten o'clock position. In the ciliary part of the iris back of the corneal scar there was a V-shaped, sharply-cut defect such as is made by a foreign body. The anterior chamber was deep; the iris had a deep brownish hue and was markedly tremulous. The lens was shrunken and opaque. Vision: light perception at three feet, projection faulty. The tension was lowered.

At the bottom of the anterior chamber there was a small quadrilateral shaped foreign body, dark in color, which simulated a piece of iron or steel. It was extremely buoyant and bounced lightly about in the chamber with every motion of the eye.

To remove it I incised the cornea below at the limbus. My incision was slightly to the side of the median plane and I applied my magnet to the incision and its tip between the lips of the same in an endeavor to remove the fragment. It gave, however, no evidence of being attracted by the magnet. I therefore enlarged my corneal incision with a pair of scissors so that part of my incision lay directly under the fragment. Immediately there was an escape of aqueous and with it what appeared to be fluid vitreous and the fragment floated through the wound upon the conjunctival surface of the eye-ball. Just as I touched it with a small forceps, to my surprise it appeared to have form without substance and broke up into numerous small flocculent particles, none attracted by a magnet.

It would appear that in this case a piece of iron or steel after lying in the eye for eight years had almost completely disintegrated. The siderosis establishes the fact that the fragment was of iron or steel. I should say that all of the iron must have been oxidized as the magnet had no influence upon it. Had a longer time elapsed it is possible that the fragment might have broken down in the anterior chamber and complete disintegration and disappearance of a fragment occurred.

E. S., age 24, was examined in 1918 and was thought to have a mere abrasion of the cornea. The lens appeared clear, the injury of slight significance. A year later he came in to see me with a well developed cataract. He recited the accident of the

year before, of having something fly into his eye when striking a piece of hardened steel with a hammer. Vision had been failing gradually for the last three months. I realized that I had probably missed a perforating injury with a steel fragment in the lens. When the pupil was dilated a dark sharply outlined mass in the lens came into view, likewise a scar of the anterior capsule.

The lens was removed by linear extraction. The foreign body was not found, as it appeared to have undergone complete rusting and resorption. Small dark grains in the lens matter, chemically indifferent, when examined under the microscope were assumed to be particles of carbon. The lens substance when acidulated gave a prompt iron-reaction.

MINIMAL DAMAGE BY SMALL FOREIGN BODIES COMPLETELY TRAVERSING THE LENS

I have some fourteen case records of injuries by a small piece of steel perforating the lens, that is, entering through the anterior capsule, traversing the lens substance and making an exit through the posterior capsule. As a group there is a tendency for the opacification of the lens to be limited to an opacity of the anterior capsule at the point of entrance, and to an opacity of the posterior capsule surrounding the point of emergence.

I shall briefly recite the history of seven out of the fifteen injuries, the seven patients recovering from the injury with useful industrial vision in the damaged eye.

W. F., age 39, was struck in the left eye in February, 1916, by a piece of high-speed steel. As the eye did not bother him much, he did not report the accident to his employer for three weeks, when the persistent redness and slight blurring of vision began to worry him.

Examination of the eye revealed a small linear scar just below the pupillary area of the cornea, a punched-out hole in the iris back of the scar and a punctate scar of the anterior capsule of the lens adjacent to the lower margin of the pupil. The pupil was round and the iris was not adherent to the scar of the capsule. In a profile it could be seen that the anterior capsular scar extended slightly backward into the anterior cortex. Except for this punctate opacity the anterior cortex was clear, also the entire nucleus of the lens. In the upper temporal quadrant of the extreme posterior cortex or in the posterior capsule itself there was a thin disc-shaped greyish opacity near the middle of which was a dark punched-out hole which seemed quite clearly to mark the exit of a foreign body through the posterior capsule. The rest of the posterior cortex was clear.

The visual acuity of the eye was 20/50. An X-ray examination showed a small fragment of steel in the vitreous which was removed without difficulty through the sclera. I have no record of the size or weight of the foreign body but I recall that it was very small. This is also indicated by the size of the hole in the iris, which still persists.

This patient has been seen from time to time since 1916. He was last examined in January, 1929, that is 13 years after the accident. The eye gives him no trouble. With a plus 1.00 sphere combined with a plus .50 cylinder axis 90, visual acuity is 20/20. There has been no change in the opacification of the lens. The opacity of the anterior capsule is still punctate, that of the posterior capsule broad, oval, fairly well outlined—appearing web-like when viewed with the ophthalmoscope. This posterior opacity is above and out from the visual axis through the lens, which accounts for the good vision. The rest of the lens is clear.

A. V., age 32, received an injury of the right eye March 30, 1926. I examined him on the following day. There was a linear wound of the cornea in the pupillary zone, 1½ mm. in length, and behind this in the anterior capsule a corresponding wound. The latter had apparently closed for there was no opacity of the anterior cortex. The nuclear region was also clear. A small sharply punched-out hole could be distinctly made out in the posterior capsule under oblique illumination, and surrounding this opening there was a thin greyish opacity like a halo. Opacity and opening were mostly temporalward from the visual axis and were in the same curved surface. Examined through the plus 20 lens of my ophthalmoscope the opacity took the form of an irregular network of lines with the opening distinguishable but less sharply outlined. A fragment of steel, well back in the vitreous, less than 1 mg. in weight, was removed without difficulty by the posterior route. The posterior opacity was observed from day to day. It decreased in size considerably, in a two-weeks period, but a small network of fewer lines remained in which the opening was less sharply marked than at first. Vision on discharge was 20/40. The patient was seen several times during a six months period. Subsequent claim has never been made for visual loss.

J. P. The right eye was injured November 21, 1923. A few days later I examined him and found a small central scar of the cornea, a scar of the anterior lens capsule and a disc-shaped posterior cortical opacity. X-ray examination showed a small metallic fragment in the vitreous which was removed posteriorly with a magnet. The opacity did not increase and three months after the injury was received visual acuity was 20/50. Recent examination of the claim file indicates that no claim for loss of useful vision has been made.

A. J. was injured in the left eye November 14, 1925. He was first examined on November 17, 1925. There was a small wound of the cornea in the pupillary zone, a wound of the anterior lens capsule and a posterior cortical opacity in the upper nasal quadrant. A fragment of steel, 12 mm. back, 4 mm. above and 4 mm. to the nasal side, was removed from the vitreous. The opacity did not progress after discharge. Visual acuity was 20/50. There was no subsequent claim for loss of useful vision.

A similar injury was that of L. S., on March 28, 1924. In my record the posterior cortical opacity is outlined as star-shaped and well above the visual axis. Vision was 20/40. I have no subsequent record of vision in this patient.

H. G. was injured September 7, 1926. I removed a fragment of steel from the vitreous. There was a small central linear wound of the cornea, a wound of the anterior lens capsule, two faint linear opacities in the anterior cortex and a posterior central opacity with a punched-out opening in the posterior capsule. Eventually vision with a plus 2.50 sphere combined with a plus .50 cylinder axis 90, was 20/40.

S. B. was examined November 6, 1926. He gave a history of an injury to his left eye in March of that year and stated an X-ray taken at the plant hospital was negative for the presence of a foreign body. There was, however, a central scar of the cornea, a scar of the anterior lens capsule and a linear path of opacity through the lens to the posterior capsule in the upper nasal quadrant. It appeared probable that the nucleus of the lens was

not in the path of the foreign body. There was an indistinct scarred-over opening in the posterior capsule. Vision was 20/50. A check-up X-ray was negative, but just back of the posterior capsular opacity there was an indistinct opaque area without definite metallic lustre that may have been a minute foreign body. The patient's eye had not changed when examined one year later.

Of the seven patients in this group of fourteen who lost useful vision, all presented at first the opacities of the anterior and posterior cataract. In three patients the lens slowly became more opaque. One had vitreous infection, and in three the posterior cortical cataract was dense enough from the beginning and directly in the visual axis, so that only large objects could be sen.

The conclusion which I have arrived at from observation of this group of fourteen patients may be briefly stated as follows:

A small foreign body frequently may pass entirely through the lens and yet the patient retain useful industrial vision. This results from a limited opacification of the lens in the form of a punctuate opacity at the point of entrance in the anterior capsule, and a disc-shaped opacity of the posterior lens capsule at the point of exit.

DISCUSSION

Dr. John R. Rogers (Grand Rapids): Dr. Begle has covered this subject to such a thorough extent that my discussion will have to be very brief. A few things have come to my mind, which I had not seen before. We have all seen cases of foreign body in the lens. I have a patient now who has a small opacity in the lens, due to a piece of metal, which did not produce a cataract, and which is getting on well apparently for the past five or six years. One point Dr. Begle brought out was that of leaving a foreign body in the anterior chamber until the capsule had time to close, before drawing it out with the magnet. Also, the removal of foreign bodies through the posterior segment, which in his hands, I think, shows a higher percentage of success than in mine. He has certainly had very good results. About 50 per cent of my cases through the posterior route have lost vision by proliferative retinitis followed by detached retina. I did not hear him mention the method of localization, whether a Sweet localizer or other method of determining the location. My experience in wounds of the posterior segment of the eye has been rather unfortunate, where I expect to get a good result. A young man working in a factory had a slight wound of the sclera above the equator of the eye, posterior to the ciliary body through which a small bit of vitreous protruded. The wound was apparently clean. I covered the wound with conjunctiva and took a stitch through that, and the eye appeared to be in good shape. After a few days I began to see a sort of cloud projecting into the vitreous attached to the wound, and swerving into the vitreous. This kept on increasing. It seemed to subside and the eye remained quiet. The man left town and I did not see him again, and a doctor in the northern part of the state wrote me that the patient had lost vision entirely, and he found on examination that there was complete retinal detachment.

Dr. Beil Bentley (Detroit): In Vienna they have a very large percentage of loss of eyes, not following operation but following penetrating injuries. The reason is the unhygienic conditions of employment. I have found the same thing in factories where working conditions are clean; you will have a smaller percentage of infections, and in other factories you will have a very large percentage. The injection of all cases with bacteria or milk injections gives good results. It is used as a preventive in all cases as soon as they come in with a penetrating wound.

Dr. Howell L. Begle (Detroit) (closing): Dr. Rogers asked about the method of localization. I have not done that myself. All my cases go to another man for localization. The Sweet method is very satisfactory except in cases of very minute foreign bodies which may be missed by the most expert retinoscopy.

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THE ESSENTIALS OF HEARING TESTS*

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It is of course impossible in one-half hour to cover the subject of functional testing of hearing. We will, however, touch upon the principal facts of this subject. The purpose of the hearing tests is to determine whether a defect of hearing is present, the degree of the impairment and the location of the lesion; that is to say whether the conduction apparatus consisting of external ear, middle ear and eustachian tube, is involved, or whether the impairment is of the perception apparatus consisting of the inner ear and auditory nerve. It is possible to get a rough estimate of the patient's ability to hear by the general attitude, the attempt at lip reading, the placing of the hand behind the ear, (the hand acting as a collector of sound waves and as a resonator) and the difference in the loudness of the voice. In conduction apparatus impairment, bone conduction is increased, so the voice sounds very loud to himself and for fear of offending, he speaks very low. On the other hand, when bone conduction is diminished, as it is in perception apparatus involvement, the voice appears very low to the patient, and in order to make himself easily understood, he is inclined to speak very loud. The pocket watch, the acoumeter and the voice are used in making the tests. The watch and acoumeter produce noises and are not very dependable for accurate testing.

The voice contains both noises and tones, and while it is not possible to standardize it definitely, if care is used it is most valuable for determining in a practical way the individual's hearing efficiency. One should endeavor to use the same intensity each time by employing the residual air, with the patient standing at the farther end of the room, with no part of the body touching the wall, the opposite ear occluded with the moistened finger, and the eyes closed or averted from the speaker. The examiner should approach the patient from a distance, noting at which point both low and high pitched sounds are heard. In English the numerals are low pitched except sixes and sevens. The tuning forks are most valuable for testing, as they produce pure tones and can be had in pitches ranging from C-2 (16 double vibrations) up to c-5 (4096 double vibrations).

Certain points should be mentioned with reference to the physics and the action of forks. Tuning forks consist of prongs and a stem. The best forks are made of one piece of metal, should vibrate for a considerable length of time, ought to be as free as possible from overtones, and preferably made of rustless metal. The prongs of tuning forks vibrate transversely with wide excursions, but little intensity. The stem of the fork at the same time is moving in a longitudinal direction, with small excursions but great intensity. When sounding bodies such as strings are excited we get not only the fundamental or actual tone of the string but also certain overtones or harmonics. Usually the first harmonic is the octave of the fundamental, with twice the number of vibrations per second; the next harmonic is the fifth above that, and the third overtone is the second octave above the fundamental. When tuning forks are struck, overtones are also heard, the first of which usually has a loud, shrill tone, with a vibration frequency five or six times that of the fundamental; these overtones are very confusing, and in order to eliminate them it is advisable to place metal weights on the lowest pitched forks. This, however, adds greatly to the weight of the fork and also lessens the period of vibration. On some of the medium pitched forks, instead of using weights, pieces of rubber tubing may be applied to the ends of the prongs to serve the purpose of eliminating overtones without adding to the weight of the fork, or to any appreciable degree shortening the period of vibration.

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So far as the matter of striking the fork is concerned, the general rule holds true that the lower the pitch of the fork, the softer should be the object used for striking it. The lowest forks are usually activated by allowing them to strike a soft object like the hypothenar eminence of the hand or the thigh. The medium pitched ones may be struck with a soft object such as a rubber covered pleximeter, and the highest ones are usually activated with a metal hammer. A definite technic should be developed by each otologist so that the results of examination are uniform and therefore comparable. When testing air conduction the outer or broad surface of the prongs, which usually gives the greatest intensity of sound, should be held close to and parallel with the ear, carefully avoiding contact with the auricle or vibrissæ. For bone conduction the stem of the fork is usually placed upon the middle line of the vertex, or over the mastoid region. The former method is used in the Weber and Schwabach tests, and the latter in the Rinne test. In the Sonnenschein-Minton modification, the stem of the fork is used for both air and bone conduction. With this procedure we get the same result as when the stem is used for bone and the prongs for air conduction, and thus the theoretical objections to the Rinne test are overcome.

The principal tests are the Weber, Schwabach and Rinne. The Weber is used for determining whether lateralization is present, by placing the fork in the median line of the vertex. In normal individuals there is no lateralization of sound. In middle ear or conduction apparatus impairment, lateralization is usually to the worse ear; with inner ear lesions it is usually to the better ear. There are many exceptions to this rule and thus the Weber is the least reliable of the major tuning fork tests, and is of value only when it agrees with and confirms the other tests. If, however, with the Weber lateralized to the worse side in a middle ear infection, there is suddenly a change in lateralization to the better hearing ear, it usually means an extension of the infection to the inner ear (labyrinthitis) of the affected side, so that the Weber then gives most important information.

Both for the Weber and Schwabach test, a medium pitched, rather heavy fork is used. One of the most popular is the Bezold unweighted (108 d.v.) fork. However, the weighted c-1, known as d sharp (dis) (154 d.v.), or the c-1 (256 d.v.) may be used. Of the magnesium alloy forks, c (128 d.v.) serves very well. These forks may be excited by allowing them to drop from a perpendicular position to a horizontal one, striking the knee or thigh, thus giving a uniform excitation to the fork. The stem is then placed on the median line of the vertex and the patient asked whether he hears the tone louder in one ear than the other or whether it is heard louder "in the head." This constitutes the Weber test.

The Schwabach test is carried out in the same manner, and the duration of the individual's hearing by bone is determined. In order to avoid the "fatigue" symptom, after a certain length of time, the fork is lifted from the head, then replaced and the patient asked if he again hears the tone. The procedure is repeated until the sound is no longer heard after the fork is returned to the vertex. The examiner then sets the fork upon his own head to see whether the patient's bone conduction is shorter or longer than his own, in order to learn whether the patient is normal or otherwise. I have always felt that it is better to have an objective control, obtained by testing a large number of individuals with certain forks to find the average duration of bone conduction at different ages, and then comparing this figure with that obtained from the patient. The Schwabach test determines the bone conduction in the individual compared with a normal living or an objective standard. A slight diminution or a slight increase in bone conduction is of no significance, but a markedly increased bone conduction usually means conduction apparatus involvement; and a decidedly shortened bone conduction usually indicates a perception apparatus impairment. Bone conduction, however, is affected by many factors, such as age, the thickness of the skull, adhesions of the dura to the bone, etc.

The duration of bone conduction has always seemed to me most important, for upon it rests in a large measure the diagnosis of the hearing impairment, especially with reference to the question of whether it is the conduction apparatus or the perception apparatus that is involved, or whether it is a combination of the two.

The Rinne test compares the air with the

bone conduction in the same individual. In normal cases we have the positive Rinne, that is, air conduction is much longer than bone; whenever bone conduction is longer than air, we have the negative Rinne. After the tuning fork is no longer heard when applied to the region of the mastoid antrum, the sound will still be heard by air conduction in the normal positive Rinne. When air conduction is longer than bone, but both factors are shorter than normal, we have a positive Rinne, but one that shows an inner ear lesion. There are also several varieties of the negative Rinne, depending upon whether the bone conduction is greatly lengthened or shortened. A negative Rinne usually means an impairment of the conduction apparatus, but when both air and bone conduction are much shorter than the normal, even though bone conduction is still longer than air, it usually means a combination of inner and middle ear disease. With an "infinitively negative" Rinne there is no hearing by air but slight hearing by bone, and this usually means that the ear under examination is practically deaf, that the hearing by bone is due to diagonal resonance, and is really beard in the opposite or normal ear.

The determination of the upper and lower tone limits of the individual is very important. In order to find the lower tone limit, we begin with the lowest forks at our command, C-2 (16 double vibrations) or C-1 (32 double vibrations). The fork is struck, the eyes of the patient are closed, and approaching him, he is instructed to say when he first hears the sound. Of course he must differentiate between merely feeling the vibrations of the air striking the auricle, and actually hearing the tone of the fork. We advance in the scale until we reach the point at which the patient begins to hear, and that is the lower limit for that ear. We then continue up the octaves until we reach c-4 and c-5.

There are three ways of exciting the highest forks. One is by rubbing the prongs with the fingers, and if the tone is not heard, striking the prong with the finger nail, and if that is not heard, striking the fork with a metal hammer. When testing with the high tones it is important that the opposite ear is closed, and that the fork (c-4, 2048 d.v.) or c-5 (4096 d.v.) is held closely to the ear that is being examined. When the patient no longer hears the sound, remove the fork for a second, to avoid the "fatigue" symptom, and then return it to the ear. Tones higher than c-5 are usually tested with whistles or the monochord. The Edelmann-Galton and the Schæfer-Galton are the preferable ones, and these are supposed to produce tones as high as 18,000 to 20,000 d.v. The difficulty with the whistles, however, is that, first of all, it is hard for the patient to distinguish between the actual tone and the sound of the air going through the whistle. Secondly, whistles are easily impaired, so that accuracy of tone is not obtained. Thirdly, it is difficult to get either uniform pressure with the bulb, or to produce sufficient pressure needed for the very highest tones. However, as a rough estimate, whistles serve very well. The Schæfer-Struychen monochord has a range of about 500 to 20,000 d.v., and possesses the great advantage that the highest tones can be tested both by air and by bone conduction.

The lower tone limit is usually raised in diseases of the conduction apparatus; and the upper tone limit is usually lowered as soon as any involvement of the perception apparatus occurs. If, later, there is further impairment of the inner ear all tones, high, middle and low are diminished.

The audiometer is a very useful instrument in many ways, but with the type usually employed in office practice (the 2 A of the Western Electric Co.), the lowest tones as well as the highest tones cannot be tested. While it is difficult, if not impossible, to properly test bone conduction with the audiometer, this can be easily done with tuning forks. The audiometer has the great advantage of furnishing a definite graph or curve which may be used for comparison with one's own or some other otologist's examination or record. The disadvantages, however, lie in the (1) fact that it is rather expensive, that (2) the type used for office work, namely the 2 A (Western Electric Co.), has only a range from 64 to 8,192 double vibrations; that (3) individual tones cannot be tested, but only the octaves, and (4) that as before said, bone conduction cannot well be determined with the audiometer, at least not with the bone conduction attachment thus far developed. Tuning forks can be used for all tests to make a complete diagnosis, and with a small in-

strumentarium. Five or six good forks are all that are necessary for the standard hearing tests, the Schwabach, Weber, Rinne, et cetera.

The newest development is the manufacture of tuning forks of a magnesium alloy, consisting of magnesium 95.6 per cent, manganese 0.4 per cent, and aluminum 4 per cent. These forks are being manufactured at Riverbank Laboratory at Geneva, Illinois, by Mr. B. E. Eisenhour. The advantage of these forks lies in the fact that they are rustproof and have a specific gravity about one-third that of steel, making it very convenient to hold and manipulate them. When forks are not nickeled they tend to rust unless they are properly handled and oiled. If they are nickeled they sooner or later peel, and the vibrations of the loose pieces of metal cause adventitious sounds.

The Gellé test is used for the purpose of seeing whether fixation of the foot plate of the stapes is present. On compressing the air in the external auditory canal, the ossicles, including the stapes footplate, are pushed inward, and in normal cases the hearing for the time is temporarily diminished. A hard rubber tip connected with a Politzer bag by a piece of tubing is inserted air tight into the auditory canal, a tuning fork is placed either upon the head, the tubing or the bulb of the bag, and any change in hearing noted during compression. Normally the hearing is diminished during the compression and returns when the pressure is released. If there is a fixation, however, increase and release of pressure do not change the hearing. The test is rather unreliable for it is difficult to get an airtight occlusion of the auditory external meatus, and secondly, unless the patient is very intelligent, it is difficult to obtain satisfactory statements regarding a change in the hearing.

The Stenger test is used for the detection of simulation of total unilateral deafness. Two forks of the same intensity and pitch are employed, (a-1, 435 d.v.) are very often used, to see whether the sound entering one ear "masks" that entering the other ear from a greater distance. The patient is blindfolded during the test. In a normal individual if one fork is held closer to, let us say, the right ear than it is to the left, the individual will hear the sound only in the right ear because that is the louder and masks the sound entering the left ear. If the simulator pretends that he is totally deaf in the right ear, we find at which distance (let us say ten inches) he hears the fork in the left or good ear. With that fork now sounding ten inches from the good ear, the other fork is brought closer to the right ear, for instance a distance of four inches. The simulator then really hears the sound only in his right ear but dare not admit it. Not knowing that the fork is also sounding at the left or good ear, he states that he does not hear anything at all, and thus is trapped.

There are other tuning fork tests such as the Lucæ-Dennert, the Bing, the Politzer and others, but they are not of great importance so far as practical work is concerned. The Weber, the Schwabach and Rinne tests are essential for determining the diagnosis of hearing defects.

Rarely do nose operations have any influence upon the hearing. Obstructions on one or the other side of the nose have practically no effect upon the hearing. Interference with proper aeration of the eustachian tube by marked hypertrophy of the posterior end of the inferior turbinates or the presence of adenoids in the nasopharynx, may have a decided effect on the eustachian tube and produce impairment of hearing of the conduction type. Likewise, infections of the nasal accessory sinuses with drainage of pus into the nasopharynx may also lead to involvement of the middle ear mechanism. The removal of septal spurs, deviation, etc., is of no value so far as the relief of hearing defects is concerned.

Tuning fork and other tests are only adjuncts in the making of a diagnosis of hearing defects. A careful examination of the patient, including ears, nose, nasopharynx and pharynx is extremely important. The correlation of all the facts obtained by the history, examination and functional testing of hearing gives one the diagnosis, permits the formulation of the prognosis and the outlining of treatment.

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A SIMPLIFIED METHOD OF CONTROLLING DIABETES MELLITUS*

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It was not many years ago that the treatment of diabetes mellitus was a hopeless procedure. The starvation method of Allen,[1] from an experimental point of view, was a step toward a better understanding of the disease. Its application, however, was only of benefit in the very mild cases. In the severe diabetic, it only prolonged, for a short time, the life of a chronic invalid.

With the advent of the high fat diet of Newburgh and Marsh,[2] and the application of the fundamental benefits derived from a semi-starvation regime, we first were able to treat and maintain, as useful members of society, a large per cent of diabetics.

The arrival of insulin was most opportune. It came when dietary treatment had been successful in about three-quarters of all cases. It gave us an instrument whereby the diabetic with a very small tolerance, the coma case, and the patient upon whom operative measures are imperative can be controlled. At the present time, diet alone, or diet plus insulin, makes the treatment of diabetes mellitus as successful as the treatment of pernicious anemia with liver. It is one of the most scientifically rational therapeutic methods we have at our command. With a few of the simple fundamental ideas of nutrition in mind, one can regulate and control a diabetic as easily and well as a patient with cardiac failure.

The food with which we feed our bodies, when chemically analyzed, falls into six groups: carbohydrates, proteins, fats, water, salts, and vitamins. The first three groups yield our energy, and it is with these foods that we are directly concerned. The utilization of carbohydrate, protein, and fat by the body is well illustrated in Table No. I.

The ability is lost in the diabetic to burn completely the units of the foods eaten. The body then attempts to excrete these substances, and, as a result, glycosuria and acetonuria occur. This is again illustrated in Table No. I.

It[3] has been shown in the total diabetic dog that all of the carbohydrate, 58 per cent of the protein, and 10 per cent of the fat is excreted as glucose. This explains why the use of large amounts of protein or carbohydrate are undesirable in a diabetic, and also why fat, with its low available glucose value, is incorporated as the principal food. Furthermore, the calories yielded by fat are roughly 9 for each gram, whereas those yielded by protein and carbohydrate are but 4 for each gram.

The average physician is not interested in the FA/G ratio, the minimum protein requirement, or the hundred and one other fundamentals that have made the whole subject of diabetes mellitus so complex to him. He does not have the facilities nor the time to do blood sugars, CO_2 combining powers, blood fats, or to calculate complicated and weighed diets.

He desires, instead, a simple plan, whereby he can control the diabetic in the shortest possible time and with a minimum amount of effort. It is not my purpose to discuss the many unsolved problems relating to diabetes mellitus. My object is to present in a simplified form the routine treatment of diabetes mellitus with its diets which have been used successfully in the University of Michigan Hospital for the past ten years. Many of the fundamentals necessary for the successful treatment of diabetes mellitus are incorporated in these diets.

The successful treatment of diabetes mellitus is possible only by the education of the patient. The nature of the disease and its many complications must be explained to him by the physician. The importance of diet in the treatment and its strict observance are essentials which must be impressed upon his mind. Furthermore, the physician

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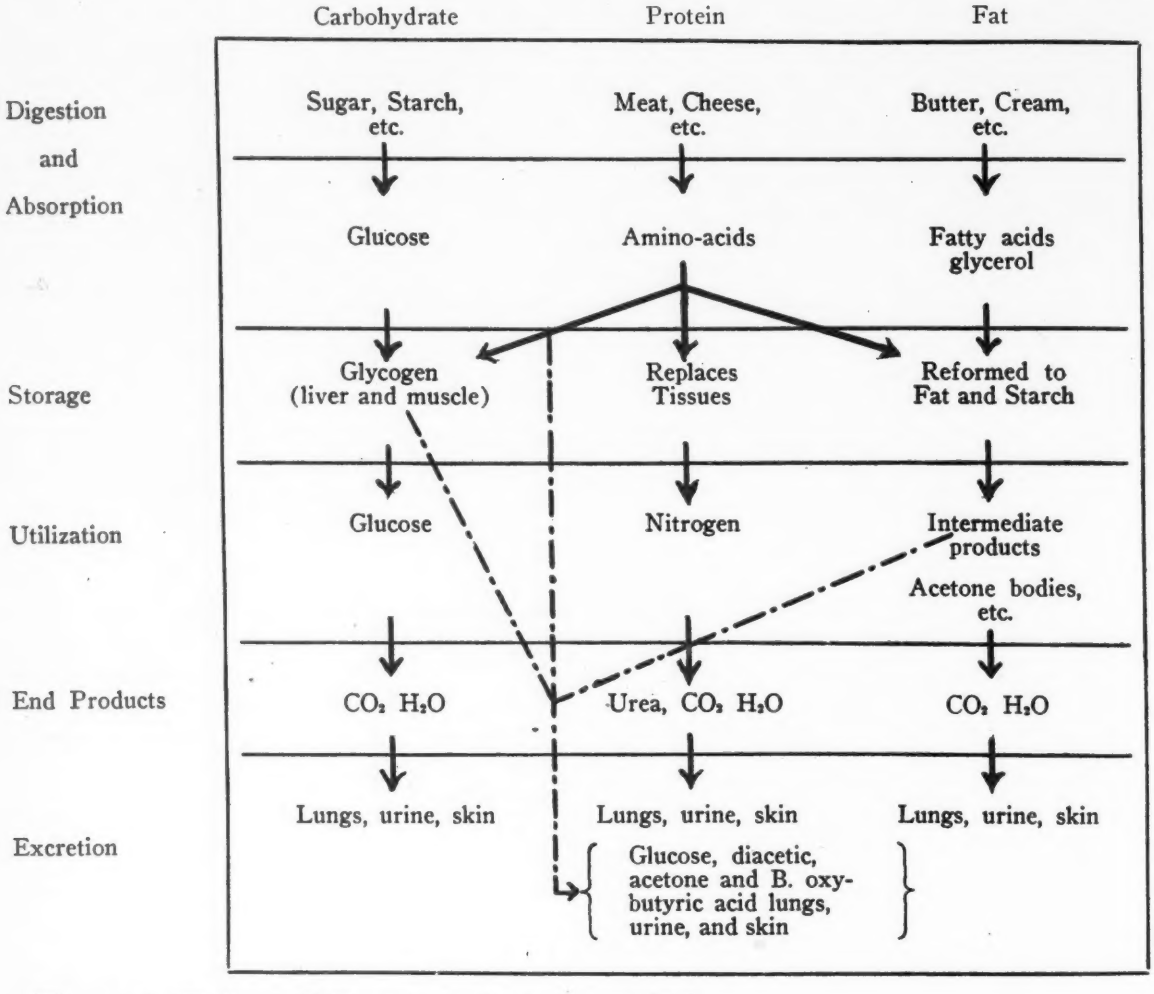
should instruct the patient in a method of testing the urine for sugar and tell him when to make his tests. A notebook should be carried by each patient with the date, the time the specimen was voided, and the color of the test recorded in it. This gives the attending physician an accurate record of his patient each time he is seen.

An economical way to test the urine is to use 20 drops of Benedict's qualitative reagent and 1 drop of urine. Boil in a cup of water for 5 minutes. If a red color appears during the boiling, it is spoken of as "four plus" and means a glycosuria of 1 per cent or more. A color of yellow with some green is a "three plus"; a green with some yellow is a "two plus"; a green heavy cloud is a "one plus," and a fine green cloud that precipitates after boiling, or a clear solution, is negative.

The acetone body commonly tested for is diacetic acid. A few drops of 10 per cent ferric chloride are added to a test tube 2/3 full of urine. Often a heavy precipitate of salts is formed. This should be filtered off and a few drops more of ferric chloride added. If the color is red (wine color), it means there is diacetic acid in the urine. When diacetic acid is present, there is also acetone. One should remember that some of the common drugs give a false diacetic test. The salicylates are the common offenders. The color developed by them is more purple than that due to diacetic acid, and it does not disappear with boiling, whereas the color due to diacetic acid does.

TABLE NO. I

A GRAPHIC REPRESENTATION OF THE DIGESTION, ABSORPTION, STORAGE, UTILIZATION, AND EXCRETION OF CARBOHYDRATE, PROTEIN, AND FAT.*



*The normal utilization, metabolism and excretion is represented by➤
The diabetic utilization, metabolism and excretion is represented by — - — -

If insulin is required, the patient should be advised in detail regarding asepsis, insulin injection, and the care of the wound.

All patients should have a gram scale and the diet should be weighed! We use the Hanson scale, which can be purchased from the Hanson Scale Company of Chicago. These scales are simply operated with a moving dial. The empty dish is placed on the scale and the dial moved so that the scale reads zero. The food required by the diet is then placed in the dish. The dish is then removed, another placed on the scale, the diet adjusted to zero, the food added, and the process continued until the diet is complete.

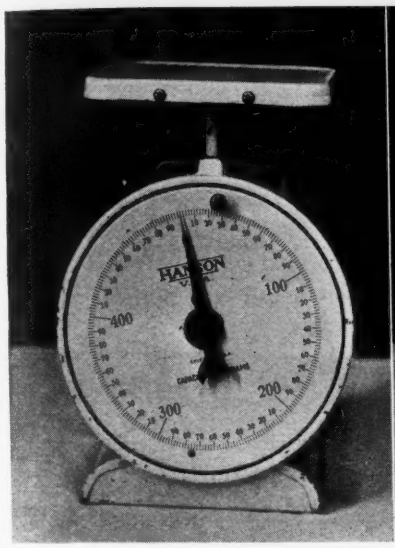


Figure 1. The Hanson Scale with the dial set at zero

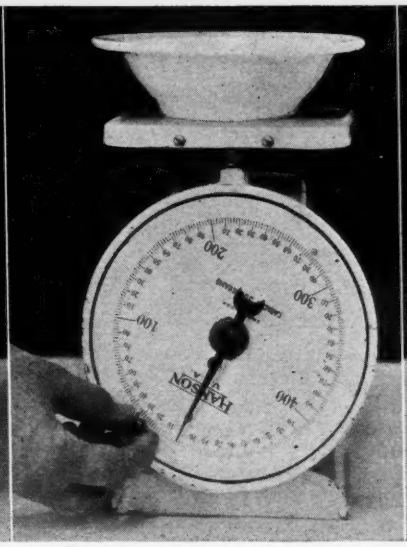


Figure 2. The Hanson Scale with an empty dish. The dial is again set at zero

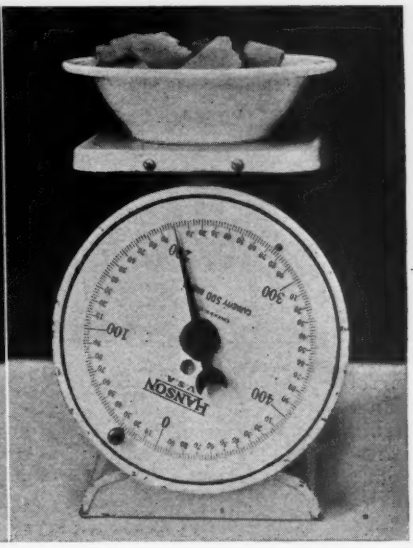


Figure 3. The Hanson Scale with 200 grams of melon. Only the actual food is weighed

Preparing a weighed diet is as simple for the patient as it is for a cook to follow a recipe. Once a patient has accustomed himself to a weighed diet, he soon learns to estimate accurately the quantity, and when in a position where it is impossible to obtain a weighed diet, he can estimate his food quite accurately.

If one can convince the wife, mother, or sister of the patient of the seriousness of this disease, and that diabetic patients on strictly observed diets are able to lead normal lives, one usually does not have much trouble in getting the coöperation of the people who are responsible for the diets.

The mild diabetic is usually middle aged or older. His symptoms are often "silent" and the disease may have been discovered by some casual routine examination, or it may have been suggested by some minor complication such as pruritis. He usually does not require insulin, and rarely has clinical acidosis. Though these patients can often be controlled by diets of "omission," i. e. restricting the sugar and starch only, this is *not* a good method of treatment. Minor infections, such as the common cold, may depress their tolerance for glucose to such a low level that they become severe diabetics who require rigid dietary restrictions.

Such a diabetic is first put on a diet which is low in calories and low in its available glucose content. This diet is known as a desugarization diet, and the patient remains on his diet until sugar-free. The diet has 50 grams of available glucose and contains about 1,400 calories. This limited food in-

DIET NO. I

50 Grams of Available Glucose

Breakfast
Bacon 30 gms.
Egg—1
Cream (Heavy Whipping) 20 gms.

Dinner
Eggs—2 or substitute (Hamburg 85)
(100 gms. Tomatoes)
Vegetables 5% 200 gms. (100 gms. Cabbage)
Mayonnaise 30 gms. (or Cream 30 gms.)
Butter 20 gms.
Cream 20 gms.

Supper
(Lettuce 75 gms.)
Vegetables 5% 275 gms. (Sauerkraut 200 gms.)
Mayonnaise 30 gms. (or Cream 30 gms.)
Butter 15 gms.
Cream 20 gms.

The articles of food in parentheses are suggestions taken from Tables II and III.

TABLE NO. II

CLASSIFICATION OF VEGETABLES AND FRUITS

(According to carbohydrate content)

5 per cent Vegetables	10 per cent Fruits and Vegetables	15 Per cent Fruits and Vegetables
Asparagus	Beets	Apples
Brussels sprouts	Blackberries	Apricots
Cabbage	Cantaloupe	Blueberries
Cauliflower	Carrots	Cherries
Celery	Cranberries	Currants
Cucumbers	Gooseberries	Huckleberries
Egg plant	Grapefruit	Lima beans (green)
Endive	Green olives	Oranges
Green peppers	Kohl-rabi	Parsnips
Greens	Mushrooms	Pears
Leeks	Onions	Raspberries
Lettuce	Peas	
Marrow	Peaches	
Okra	Pineapple	
Pimentoes	Squash	20 Per cent Vegetable
Pumpkin	Strawberries	
Radishes	Turnips	Potato
Rhubarb	Watermelon	
Ripe olives		
Sauerkraut	also	
Sorrel		Bread is 52 per cent Carbohydrate
Spinach	Cereals—(10 gms. may replace	
String beans	100 gms. of 10% vegetables)	
Swiss chard	Cornflakes	
Tomatoes	Oatmeal (dry weight)	
Watercress	Popcorn	
	Puffed Rice	
	Puffed Corn	
	Puffed Wheat	
	Shredded Wheat	
	Wheaties	

Vegetables and fruits may be weighed either before or after cooking, with the exception of apples for apple sauce or baked apples and oatmeal (rolled oats). These must be weighed before cooking.

Carbohydrate Equivalents

The amounts of vegetable which contain equal amounts of carbohydrates, and which may be used to replace each other are shown below.

100 gms. 5% vegetable = 45 gms. of 10% vegetable = 30 gms. 15% vegetable
100 gms. 10% vegetable = 225 gms. of 5% vegetable = 70 gms. 15% vegetable
100 gms. 15% vegetable = 325 gms. of 5% vegetable = 145 gms. 10% vegetable

Sugar-free canned fruits, tomatoes, peas:

Rosedale brand—Libby, McNeil & Libby, Chicago, Ill.
Richelieu diabetic brand—Sprague Warner Co., Chicago, Ill.
Dieta brand—W. N. Clark Co., Syracuse, N. Y.
Cellu brand—Chicago Dietetic Supply Co., 1750 W. Van Buren St., Chicago, Ill.

take lowers the patient's metabolism, allows only maintenance calories at most, and restricts the glucose intake so that the excess of sugar in the blood is either burned or excreted.

The patient is asked to collect a 24-hour specimen of urine, beginning just after breakfast and extending to just before breakfast the next morning, estimate its quantity, test it qualitatively himself and record the color, or bring you a small portion to test. It is best, but not essential, to do a quantitative sugar test. The diet is not essentially altered until the patient is sugar-free. Food substitutions may be made from the following tables to give the diet variety, but the protein, fat, and carbohydrate totals are left unchanged. Daily

DIET NO. II

70 Grams of Available Glucose

Breakfast

Bacon 40 gms.
Eggs—1
Cream (Heavy Whipping) 45 gms.

Dinner

Eggs—2 or substitute (Hamburg 85)
Vegetables 5% gms. (100 gms. Cabbage plus 100 gms. Tomatoes)
Vegetables 10% 50 gms. (Grapefruit)
Mayonnaise 30 gms.
Cream 20 gms.

Supper

Vegetables 5% 200 gms. (Lettuce 50 gms. plus Sauer Kraut 150 gms.)
Vegetables 10% 50 gms. (Peaches)
Mayonnaise 30 gms.
Butter 20 gms.
Cream 20 gms.
Use heavy whipping cream.
The articles of food in parentheses are suggestions taken from Tables II and III.

urines are tested and the patient usually is sugar-free by the third day on the diet.

The next diet given the patient increases all food elements, but the essential food increase is glucose, which now is 70 grams.

This diet increases the glucose total 20 grams and the calories 400. The patient is left on this diet for three days. The urine should be collected in 24 hours samples if possible. Qualitative tests are again done on each sample by the patient, and the physician notified of the result. Should the patient remtain sugar-free on this diet for a three-day period, a still higher diet is given. This diet increases the total available glucose to 90 grams and the calories to 2,340.

TABLE NO. III

EGG SUBSTITUTIONS

Any of the following may be used in place of 2 eggs.

	Grams
Beef steak (fat)	85
Roast beef	56
Boiled beef	68
Omit butter	10
Omit cream	5
Cheese, American	50
Omit butter	10
Omit vegetable 5%	50
Cheese, Cottage	70
Add butter	10
Omit vegetable 5%	70
Chicken, Roast	46
Chicken, Stewed	56
Codfish (salt)	55
Add butter	10
Add cream	5
Crabmeat	85
Add butter	10
Dried beef	45
Add butter	10
Fish (fresh)	75
Add cream	5
Ham (boiled)	65
Omit butter	5
Ham (smoked)	85
Omit butter	25
Liver (beef or calves)	50
Bacon	30
Omit butter	15
Lamb (chops or steak)	70
Roast Lamb	46
Lamb stewed	56
Omit butter	10
Lobster	80
Add butter	10
Oysters	160
Add butter	10
Omit vegetable 5%	170
Oysters	100
Bacon	50
Omit butter	30
Omit vegetable 5%	100
Pork chops (med. fat)	85
Omit butter	15
Omit cream	5
Roast pork	65
Omit butter	5
Salmon (canned)	70
Add cream	5
Sardines	55
Sausage (summer)	50
Omit butter	15
Shrimp	50
Add butter	10
Add cream	5
Sweetbreads (boiled wt.)	64
Sweetbreads (boiled wt.)	48
Bacon	30
Omit butter	15
Veal steak or chop (fat)	65
Roast veal	40
Add butter	10

DIET NO. III

90 Grams of Available Glucose

Breakfast

Bacon 30 gms.
Eggs—2
Vegetables 10% 100 gms. or cereal 10 gms.
Cream (Heavy Whipping) 80 gms.

Dinner

Eggs—2 or substitute (Hamburg 85)
Vegetables 5% 270 gms. (Tomatoes 100 gms. plus Cabbage 170 gms.)
Mayonnaise 40 gms. (or cream 40 gms.)
Cream 30 gms.
Butter 30 gms.

Supper

Eggs—2 or substitute (Boiled Ham 65)
Vegetables 5% 200 gms. (Lettuce 50 gms. plus Sauer Kraut 150 gms.)
Vegetables 10% 40 gms. (Peaches)
Mayonnaise 40 gms. (or cream 40 gms.)
Cream 30 gms.
Butter 30 gms.
Use heavy whipping cream.
The articles of food in parentheses are suggestions taken from Tables II and III.

The patient remains on this diet for three days with daily 24 hour urine samples collected, each of which is examined for glucose qualitatively. If no glycosuria occurs, the patient is ready for a further increase in carbohydrate.

The following steps are similar to the other increases in diet except in one respect. The former increases in calories and available glucose were made by adding protein, fat, and carbohydrate to the diet. The last diet is high enough in protein, and contains enough fat for calories, so further increases are made by adding carbohydrate only.

This is usually done by adding to the latter diet 30 grams of glucose as 600 grams of 5 per cent vegetables or 300 grams of 10 per cent vegetables. If the bulk of the former diet is sufficient, 10 per cent vegetables are added. If the patient desires more bulk,

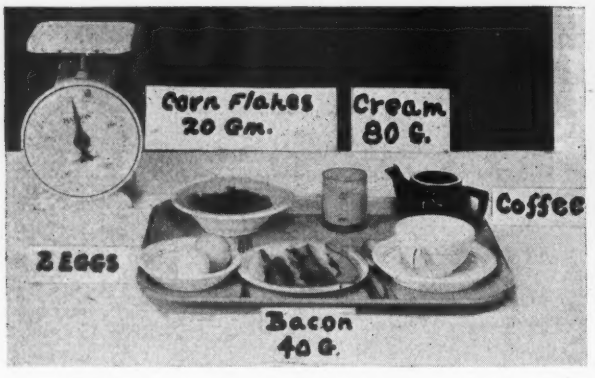


Figure 4. The breakfast of Diet No. IV

5 per cent vegetables are added. This increases the diet 30 grams of glucose, 120 calories, and makes an available glucose of 120 grams.

DIET NO. IV

120 Grams of Available Glucose

Breakfast
Bacon 40 gms.
Eggs—2
Vegetables 10 % 200 gms. or cèreal 20 gms.
Cream 40% 80 gms.

Dinner
Eggs—2 or substitute (Hamburg 85)
Vegetables 5% 270 gms. (Tomatoes 100 gms. plus Cabbage 170 gms.)
Vegetables 10% 110 gms. (Grapefruit)
Mayonnaise 40 gms. (or cream 40 gms.)
Cream 30 gms.
Butter 30 gms.

Supper
Eggs—2 or substitute (Boiled Ham 65)
Vegetables 5% 200 gms. (Lettuce 50 gms. plus Sauer Kraut 150 gms.)
Vegetables 10% 150 gms. (Peaches 150 gms.)
Mayonnaise 40 gms. (or cream 40 gms.)
Cream 30 gms.
Butter 30 gms.
Use heavy whipping cream
The articles of food in parentheses are suggestions taken from Tables II and III.

This diet is, in most cases, a maintenance diet. It contains enough calories for the average individual and has a sufficient amount of protein. The relation of carbohydrate to fat is such that the diet is pleasant to eat, and it has enough bulk to satisfy the hunger of the patient.

If the patient is required to do very hard physical labor and needs more calories than are given by the fourth diet, 130 grams of 40 per cent cream are added and half of the cornflakes of the breakfast removed. This makes the calories about 3,000 and leaves the available glucose of the diet still the same. The additional cream is served at breakfast.

If the patient is obese, and this is frequently the case, the diet must serve a twofold purpose. It must keep the patient aglycosuric and also reduce the weight. Again this same maintenance diet is used with slight modifications. If the mayonnaise and cream of Diet No. IV is omitted, it removes approximately 100 grams of fat and thereby reduces the calories to about 1,300, which is a good reduction diet. (See Fig. 8.)

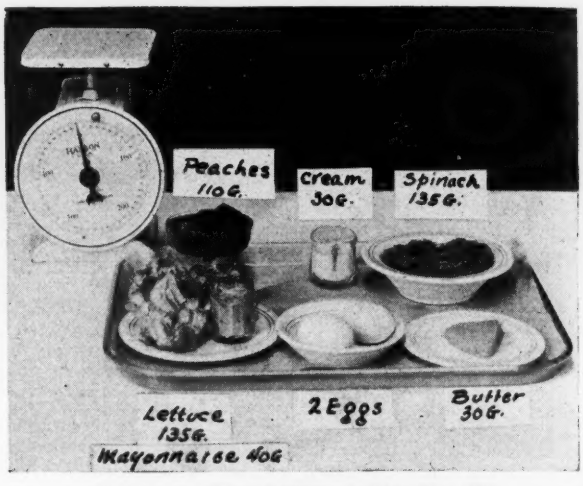


Figure 5. The dinner of Diet No. IV

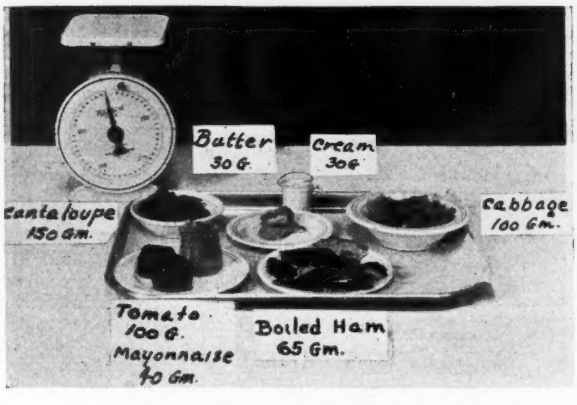


Figure 6. The supper of Diet No. IV

If the physician wishes to give more carbohydrate than suggested in the maintenance diet, or if he desires to determine the patient's tolerance for glucose, the routine is continued of increasing the glucose of the diet 30 grams after 3 day periods of aglycosuria. This is done by the addition of vegetables of the 5 per cent, 10 per cent and 15 per cent carbohydrate group, or as the diet

gets higher in glucose as potato, which is a 20 per cent vegetable, or as bread, which is 52 per cent carbohydrate. All additions are made to the maintenance diet. Each addition must be divided into 3 equal parts and one part added to each meal. Diabetics must receive approximately the same amount of glucose each meal. They must not have a light breakfast and heavy dinner.

Should the patient fail to desugarize on the first, second, or third diets, then the patient either has an infection depressing his tolerance, or he is a patient who must be given insulin. In the former case, the removal of the infection will raise the tolerance. The latter method of treatment will be discussed later.

When a patient is stablized on a maintenance diet, weekly urine examinations, done qualitatively by the patient and recorded, are essential. If glycosuria appears, it should be reported at once to the physician.

If a patient is stabilized and aglycosuric on a maintenance diet and then develops an infection with a resultant depression of tolerance, he should immediately decrease his diet in half and continue on this decreased diet until the glycosuria subsides or the infection resolves. By this I mean that each serving of his diet should be one-half the amount called for on the diet sheet. This automatically puts him on a desugarization diet, and benefits him in keeping him aglycosuric at a time when he needs all the protective mechanism his body can assemble. Another method is to put him on the desugarization diet first described which contains 50 grams of available glucose and 1,400 calories.

The severe diabetic is usually young.

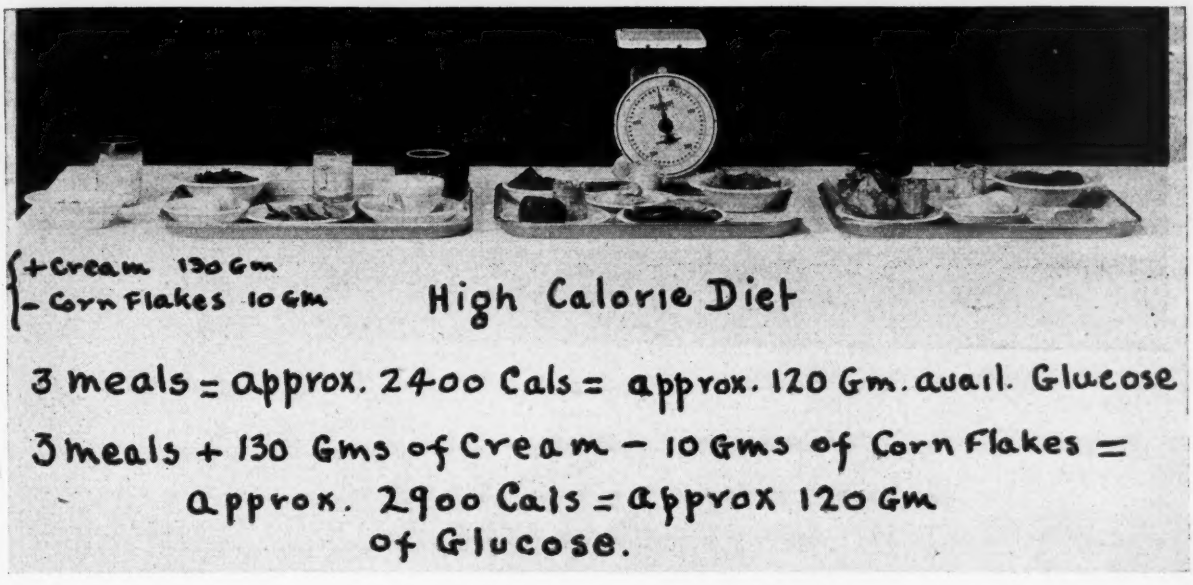

+Cream 130 Gm
-Corn Flakes 10 Gm
High Calorie Diet
3 meals = approx. 2400 Cals = approx. 120 Gm. avail. Glucose
3 meals + 130 Gms of Cream - 10 Gms of Corn Flakes =
approx. 2900 Cals = approx 120 Gm
of Glucose.

Figure 7. Diet No. IV converted into a higher calorie diet by the addition of cream and the removal of one-half the cornflakes.

The disease is often sudden in its onset, and the symptoms are marked. When first seen, they are often dehydrated, thin, lethargic, with an acetone breath, severe glycosuria, and acetonuria. It is advisable, though not imperative, that the patient be confined to bed. A reduction of his metabolism by rest is beneficial in itself. He is also given the first diet suggested in the treatment of the mild diabetic. It is imperative, however, that he should receive at least 4,000 cubic centimeters of fluid daily to relieve the dehydration produced by the acidosis.

The desugarization of a patient in this group is slower and hence from one to six or seven days may elapse before this process has been completed. After complete desugarization for three days has been obtained, the next diet is given and the treatment continues as it did in the mild group. Because diabetics of this type are more severe and longer intervals occur before complete desugarization, it is more important to have daily urine sugar records. They tell of the progress of the desugarization process. If the 24 hour glucose excretion decreases each day, one knows the diet is serving its purpose. If, however, the glu-

cose in the urine remains the same or increases or the acidosis becomes more marked, one must put the patient on a maintenance diet with insulin.

It is not my desire here to discuss the relation of insulin to tolerance. The only fact I wish to use at this time is that insulin aids in the combustion of glucose. It is said that one unit of insulin will cause the oxidation of 2 grams of glucose. This is not true! A patient in acidosis will only burn a fraction of a gram of glucose for every unit of insulin. Conversely, a controlled diabetic may combust as many as 3 or 4 grams of glucose for each unit of insulin. The dose of insulin then is empirical, and the amount given must be measured according to the clinical course of the patient.

We follow our patients receiving insulin in the following manner. The patient is given a maintenance diet. Urine specimens are collected from 8 A. M. to 12 N., from 12 N. to 5 P. M., and from 5 P. M. until 8 A. M. The patient is fed at 8 A. M., 12 N., and 5 P. M. Ten units of insulin are given one-half hour before each meal. Each fractional urine is examined for glucose and the approximate amount recorded. The same diet and insulin dosage are continued. The fractional urine specimens are again examined for glucose and compared with those of the previous day. If the patient shows a decrease in the glucose in each specimen, the insulin dosage is left unchanged. If some one specimen, such as that from 8 A. M. to 12 N., shows an increase in its glucose content, then the dose of insulin given before breakfast is increased 5 or 10 units as necessary, depending upon the amount of glucose or the symptoms of the patient. By using fractional urine collections one has an index of the metabolism of glucose for the preceding meal, and one can tell whether to increase, decrease, or continue the same insulin dosage.

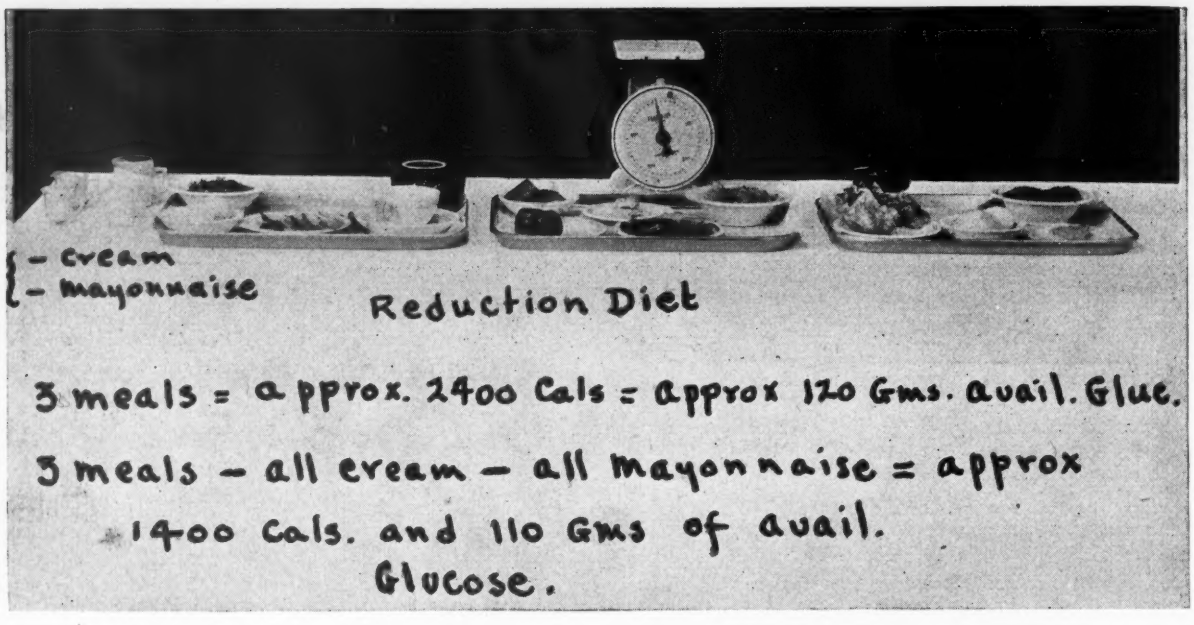

- cream
- mayonnaise
Reduction Diet
3 meals = approx. 2400 Cals = approx 120 Gms. avail. Glue.
3 meals - all cream - all mayonnaise = approx
1400 Cals. and 110 Gms of avail.
Glucose.

Figure 8. Diet No. IV converted to a low calorie diet by the removal of the cream and mayonnaise.

Experience shows that, in most cases, the morning dose of insulin must be the largest, the evening dose smaller, and the noon dose the smallest, or it can often be omitted entirely. More than 3 doses of insulin a day should be avoided if possible as they are at best a burden to the patient. Large doses are painful, expensive, and often cause insulin reactions and should be avoided if possible.

Every patient taking insulin should be informed of the cause and symptoms of an insulin reaction. Each patient should carry a lump of sugar with him constantly, to be taken when such emergencies arise. He should also be instructed to report any reaction to his physician so that the proper insulin dose can be reduced. In the hospital, insulin reactions are often controlled by giving ½ glass of orange juice or ½ c.c. of epinephrin. The latter mobilizes the glycogen from the storehouses and relieves the symptoms quite readily.

As soon as the diagnosis of diabetic coma has been made, inject 50 units of insulin subcutaneously. Severe coma should be cared for in a hospital with a nurse in attendance if possible. The initial dose of insulin should be given without waitng for the patient to arrive at the hospital.

The subsequent care of a coma case depends on the symptoms of the patient, but it is safe to say that several more large doses of insulin will be necessary. A good plan to follow is to obtain urinary specimens every 3 hours, making sure that the bladder is emptied each time. This may have to be done by catheterization. Each specimen is tested for glucose and acetone bodies, and it represents the metabolism of the patient during the previous 3 hours. If glycosuria and acetonuria persist, injections of 20 to 50 units are necessary every three hours until the coma has disappeared.

All coma cases are dehydrated. The administration of fluid is an essential part of the treatment, and it can be safely said that too much fluid cannot be given. Each patient should receive at least 150 c.c. of fluid each hour. This can often be given by mouth, but if the coma is deep, a sub-pectoral infusion of normal saline, or better, Ringer's solution should be begun and continued until fluid by mouth can be administered.

After the coma has begun to subside and should the urine still contain large amounts of acetone bodies, but little glucose, then each dose of insulin should be given with one-half as many grams of glucose. Glucose may be given by mouth as orange juice, calculating 10.8 grams of glucose for each 100 c.c. of orange juice, or as corn syrup, which is roughly 100 per cent glucose. If the patient is not conscious, a sterile solution of 10 per cent glucose can be given intravenously. It is not necessary, and it is often detrimental, to give glucose with each dose of insulin. Glucose should be given only when the urinary sugar is low and the acetone bodies are present in large amounts. Instead of giving glucose with insulin, we feed our patients 40 grams of glucose as orange juice (orange juice 230 grams, sugar 15 grams) each meal time. This allows slower absorption of the glucose and helps stabilize the patient on a diet so that when the coma has subsided we are already giving and covering with insulin 120 grams of glucose a day, which is equal to the total glucose of a maintenance diet. As soon as the patient can eat, a soft diet such as follows is given.

DIET NO. V—SOFT DIET

120 Gram of Available Glucose.

Breakfast—Choose one of the following groups:

I.

Soft boiled egg	
Milk toast	
Toast	30 gms.
Milk	100 gms.
Butter	10 gms.

II.

Scrambled egg	
One egg	
Cream	30 gms.
Butter	10 gms.
Cereal	10 gms.
Milk	120 gms.
Cream	50 gms.

III.

Eggs	2
Toast	20 gms.
Butter	10 gms.
Milk	120 gms.

IV.

Toast	30 gms.
Butter	10 gms.
Applesauce (Strained)	60 gms.
Cream	50 gms

V.

Cereal	10 gms.
Milk	120 gms.
Bread	20 gms.
Butter	5 gms.

VI.

Bread	20 gms.
Butter	5 gms.
One egg	
Cooked Peach (Strained) or	90 gms.
Applesauce (Strained)	60 gms.

Dinner and Supper—Choose one of the following groups at a meal:

I.

Baked potato	100 gms.
Butter	10 gms.
Milk	130 gms.

II.

Bread	25 gms.
Butter	5 gms.
Baked custard	
One egg	
Milk	100 gms.
Cream	80 gms.
Saccharine	¼ grain
Vanilla or nutmeg	

III.

Bread	25 gms.
Butter	5 gms.
Soup	
Asparagus (Strained)	100 gms.
Milk	100 gms.
Cream	50 gms.

IV.

Mashed potato	
Potato	100 gms.
Butter	10 gms.
Milk	50 gms.
Cooked Peach (Strained)	60 gms.

V.

Cooked rice	100 gms.
Milk	140 gms.
Butter	5 gms.

VI.

Eggs	2
Bread	30 gms.
Tomatoes (Cooked and Strained)	100 gms.

and this in turn is replaced as soon as possible by Diet No. IV. By this method the patient is carried through the difficult period following coma with comparative ease. All coma cases are not subsequent insulin patients. Coma may have been produced by a depression of tolerance as a result of an infection, and when both the coma and the infection have cleared up, the patient may be able to tolerate a diet comparatively high in glucose without insulin.

The treatment of the preoperative and post-operative diabetic does not differ from the treatment of the uncomplicated diabetic. A few simple rules must be followed. Their observation increases the prognosis of the diabetic to a per cent somewhere near the non-diabetic. These rules are as follows:—

1. No diabetic should be operated upon until he is stabilized and sugar-free on a maintenance diet, with the exception of a real surgical emergency.
2. All operations should be as rapid as possible, with gas as the anesthetic of choice.
3. No diabetic should miss a meal. If the patient cannot eat, 40 grams of glucose as orange juice are given each meal time. If this cannot be taken, 40 grams of glucose should be given intravenously as a 25 per cent or 10 per cent glucose solution. An infusion of 5 per cent glucose can be used, allowing the patient 40 grams of glucose every 4 hours of the day and discontinuing the infusion of glucose solution during the night. The preoperative breakfast should either be replaced by 40 grams of glucose as orange juice or 40 grams of glucose given intravenously. Always try to keep the diabetic controlled.
4. Fluid should be administered continuously to the post-operative diabetic. Every patient should have 4,000 c.c. as a minimum. It can be given by mouth, Murphy drip, or by infusion. It is as important as any other procedure, except insulin, in the treatment.
5. Post-operative fractional urine specimens should always be collected and insulin dosage, if necessary, based on the results of the urine examinations. Many diabetics will need some insulin for a few days after an operation. There is often a temporary depression of tolerance, and the glycosuria must be continually checked by urine examinations. When the tolerance returns, improvement is rapid, and the insulin must be cut down rapidly or the patient will be upset by insulin reactions.
6. As soon as possible, a liquid diet is given the patient. This is followed by a soft diet, and then a solid diet. If 40 grams of glucose have been given each meal time throughout the more critical periods, and this either tolerated by the body or made available for combustion by giving some insulin, the change to the soft and solid maintenance diet is no more difficult than the same change in a non-diabetic patient.

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CHEWING TOBACCO RESPONSIBLE AS A SOURCE OF SUGAR IN CERTAIN DIABETICS

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In the past 15 years it has come to my attention that many practicing physicians are not familiar with the possibilities of chewing tobacco as a source of unaccounted for sugar in certain diabetics. I have seen in consultation nine patients suffering from severe diabetes, who, in spite of very low carbohydrate diets, still excreted sugar without accountable cause. Two of these patients were in the hospital under the strictest supervision and became quite a puzzle to the physicians in attendance until it was discovered that they were using approximately 2 ounces of chewing tobacco a day. Upon investigation it was found that sugar would appear or disappear from the urine as tobacco was chewed or withheld. Further investigation showed that of samples of tobacco examined, the sugar content varied in different brands used and sometimes in the same brand examined. The brands examined included Plug, Fine-Cut, and Scrap.

All the samples of Scrap tobacco examined showed high sugar content. Conclusions from the investigation so far suggest that persons who chew 2 ounces of Scrap tobacco a day would take into the mouth from 14 to 16 grams of sugar a day.

All the patients were questioned in regard to swallowing tobacco juice and they all denied that they did so voluntarily.

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OCULAR MANIFESTATIONS OF DIABETES*

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In medicine as in real estate we have our "booms." In the treatment of syphilis there was the arsenic boom; in tuberculosis, tuberculin; in smallpox, vaccination; in diphtheria, antitoxin; and many others might be mentioned. The diabetes-insulin boom has only recently been superseded by the hog stomach treatment of pernicious anemia.

Diabetes, one of our more common general systemic diseases, undoubtedly still holds its share of the limelight. It is of interest to the ophthalmologist since the eye often presents symptoms of infinite value to the general practitioner in the diagnosis, treatment, and prognosis of the disease. Insulin treatment at times produces untoward eye symptoms which will be pointed out later. Occasionally the disease is suspected for the first time following an examination of the eyes.

This is particularly true in regard to changes in refraction which have been estimated to occur in from 15 to 20 per cent of diabetic cases. There may be a gradual, or often a sudden and considerable degree of change toward myopia—the patient actually becomes near-sighted or has a reduction in the amount of previous far-sightedness—giving rise to the mythical lay term of "second sight." The opposite to the above change in refractive error is seen following insulin treatment of the diabetic, where a sudden increase in hyperopia is seen to occur. These changes have all been explained by the physical laws of osmosis: that when the sugar content of the media in which the lens is bathed reaches a certain concentration there is an imbibation of fluid by the lens with a resultant increase of lens volume, producing myopia; in a like

*Read before the Staff of the Receiving Hospital, Detroit, February 12, 1930.

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manner under energetic insulin treatment when sugar metabolism is at a maximum the osmotic flow is from the lens, resulting in marked hyperopia.

The following case referred by Dr. C. W. Lemmon demonstrates a transitory hyperopic refractive error produced by insulin. Mrs. A. B., fifty years of age, gave the history of impaired vision for near starting six or seven weeks previously. This became progressively worse and three weeks ago the distance vision became quite noticeably impaired. The above symptoms followed very closely after the beginning of insulin treatment for diabetes. Examination of the eyes showed the pupils equal and responding well to both light and accommodation. The refractive media (cornea, aqueous, lens, and vitreous) were clear. There was no evidence of gross pathology in the fundi. Refraction:

Vision R.E. = 15/200, with + 2.50 sph. = + 50 cyl. × 75° = 20/15.

Vision L.E. = 15/200, with + 2.50 sph. = ... = 20/15. + 1.50 sph. was added for near vision.

One week later the distance vision had again returned to normal and only glasses for near vision were prescribed. In one case under insulin treatment seen here on the ward not only was there a high degree of hyperopia but also a paresis of accommodation due probably to the general debility which accompanied the disease. As sugar metabolism stabilizes, these changes revert to their original normal.

Diabetic cataract is yet another change in the refractive media of the eye and occurs under two chief forms, the first of which is much more typical, presenting a dirty gray homogeneous appearence. It is rapid in its development, occurs bilaterally in young patients and late in the disease. The other form occurs in older patients and takes on the appearance of a senile cataract. Given an otherwise apparently normal eye and a blood sugar within normal limits, there are no contra-indications to removal of the cataract, preferably in its capsule. Insulin seems to have an untoward effect in producing hemorrhages and should be withheld for about four weeks following the operation.

Inflammation of the iris occurs with varying degrees of severity. In the typical case there forms a characteristic flocculent exudate in the pupillary space which results in a marked reduction of visual acuity. The iris itself is greatly congested and swollen.

Ocular palsies are seen not infrequently in diabetic cases. Vertical diplopia and ptosis of the upper lid are the commonest findings and indicate an involvement of one of the branches of the third nerve. The sixth nerve is at times also involved, producing an internal strabismus. In most cases the paralysis is due to a peripheral neuritis although it is probable that some result from small hemorrhages, in which case the prognosis for recovery of function would be more guarded.

Retinitis characteristic or diagnostic of diabetes has long been a matter of controversy for two chief reasons: Primarily, because it is not found in young individuals, in whom the disease presents its most malignant form; secondly, because it is as a rule found in diabetics who have an associated albuminuria and a heightened systolic blood pressure, either of which can produce a somewhat similar fundus picture. It is thus seen that it is difficult to state positively from an ophthalmoscopic examination alone that a retinitis is or is not of diabetic origin. Hirschberg has grouped together certain retinal lesions which, taken with the general findings, suggest the diagnosis of diabetic retinitis:

(1) An entirely characteristic inflammation of the central portion of the retina with small bright spots, usually also with hemorrhagic points (retinitis centralis punctata diabetica).

(2) Hemorrhages of the retina with the resulting inflammatory changes and degenerations (retinitis hemorrhagica diabetica).

(3) Rarer forms of retinal inflammation and degeneration, the connection of which with the primary disease is yet to be demonstrated.

Hirschberg found none of his retinitis cases were below forty years of age. Only a few cases are reported in the literature below the age of thirty-five. I have seen one case twenty-seven years of age, Miss T. R., referred by Doctor Robert Schæfer. The fundus examination showed a moderate blurriness of each disc nasally. The retinal vessels gave the impression of being filled to capacity, with the arteries showing the silver wire light reflex but producing no depression when overlying a vein. Fine areas of exudate, some of which were con-

glomerate, were seen in the macular region. A sharply defined area of wax-like exudate about the size of the disc was seen at the primary branching of the superior temporal artery of the right eye. There were many small round hemorrhages of the deep variety in the posterior segment of each eye. The urine was positive for sugar but negative for albumin; her blood showed a hyperglycemia.

The prognosis in diabetes is much better than in albuminuric retinitis; 60 per cent live for a period longer than two years following the discovery of the retinitis.

Ophthalmoscopically there is a picture occurring late in the disease which is characteristic of only diabetes. In rare cases there occurs a condition known as lipemia retinalis in which the arteries and veins have the appearance of being filled with milk. They lose their cylindrical shape and appear flat and ribbon-like. No hemorrhages or exudates occur; the vision remains normal. Lipemia retinalis is produced by an increase in the fat content of the blood, which it is believed must reach a percentage of five before retinal changes are seen. It occurs in young diabetics, the oldest reported case being forty-eight.

Retro-bulbar neuritis, an inflammation of the optic nerve somewhere between the eye and the optic chiasma, is found in diabetics of all ages. It occurs in 10 to 20 per cent of the cases, usually in those addicted to the use of alcohol or tobacco. The patient is suddenly alarmed by the fact that he can only distinguish the hazy outline of objects. Examination of the fundi reveals no pathological change unless the neuritis is prolonged, then some degree of atrophy of the disc may be seen. The fields show a central scotoma for form and color.

THE NEW MEDICAL RESERVE CAMPS

HENRY R. CARSTENS, M.D.†
DETROIT, MICHIGAN

A large number of the members of this society are commissioned in the Medical Reserve Corps of the Army, and as announcements of the Summer Training Camps have recently appeared, a brief report as to the activities conducted at the camps may be of interest to reserve officers. Possibly the memory of war-time camps with endless drilling and constant drudgery exists to such an extent that reservists, while still having a warm interest in national defense and being desirous of continuing their appointments, feel that attendance at camps is an irksome duty which must be discharged from time to time. Conditions have changed, for the writer found attendance at the Fort Snelling camp last summer such a pleasant experience that he hopes to be able to repeat it at frequent intervals.

Fort Snelling is on the outskirts of St. Paul and Minneapolis. The medical camp is conducted in a group of barracks on the reservation. Colonel George A. Skinner, M. C. (Surgeon of the 7th Corps Area), was in charge as Senior Instructor; Lieut.-Colonel W. Lee Hart, M. C. (6th Corps Area), acted as Plans and Training Officer; six or eight Junior Medical and Dental Officers were on duty as supervising instructors. The instruction was arranged in unit groups, six general hospitals, five evacuation hospitals, and seven medical regiments. The total attendance was over 400 officers, making about 25 in each group. A general schedule had been arranged, but each group was responsible for the details of its own instruction.

The basic subjects were as follows: (1) Military Policy of the United States; (2) The Army of the United States; (3) Topography; (4) Organization of the Medical Department; (5) The Soldier, his Pack and his Problems; (6) The Functions of the "Arms" of the Army; (7) Training; (8) Citizenship in Relation to Military Training; (9) Mechanization of Modern Armies; (10) The Medical Supply Officer and Medical Supplies; (11) The Quartermaster and General Supplies; (12) Chemical Warfare and Warfare Cases; (13) The Mess, the Ration and the Mess Officer; (14) The Non-Commissioned Officer; (15) Hygiene

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and Sanitation (two periods); (16) Aviation and Aviation Medicine; (17) Evacuation of Sick and Wounded in War; (18) Medical Department Field Records; (19) Functions of Command and Staff; (20) Budget and Finance; (21) Military Law; Mobilization Plans; (22) Industrial Mobilization; and (23) Medical Aspects of Mobilization.

As an example of the day's schedule, the program for July 16 is presented.

6:00- 6:15—Calisthenics.
6:30- 7:30—Breakfast.
7:30- 8:20—Conference: Evacuation of Sick and Wounded in War.
8:30- 9:15—Drill.
9:30-10:30—Conference: Hygiene and Sanitation.
10:40-11:45—Conference: Medical Department Field Records.
12:00- 1:00—Dinner.
1:00- 3:30—Organizational Training.
3:45- 5:45—Recreation.
6:00- 7:00—Supper.

Schedules for the other days were arranged similarly, covering the various subjects given above. It will be noted that during the morning hours general medical subjects were considered, in the afternoon hours (Organizational Training) subjects pertaining to the unit concerned were taken up (for example on this day our general hospital unit discussed "Organization of a Surgical Service").

The conferences were entirely informal. Each officer was allotted a subject in advance, together with appropriate texts and references. He then worked up his subject and presented it at the scheduled hour. General discussion by the members of the unit followed. The regular army medical staff acted as supervising instructors by aiding the officers in every possible way in the presentation of the subjects.

Drill was conducted by Lieut.-Colonel Bernard Lentz, Inf. Instead of being the drudgery that many found it to be during the war, it was a pleasure to which most of us looked forward each morning. Colonel Lentz's compelling leadership and ready wit made it more of a sport than arduous physical exercise. The first morning it was about as tiring as playing one hole of golf. At the end of two weeks, it became as exhausting as playing four or five holes of golf.

The mess was excellent, good food well prepared, and plenty of it; the last named quality was much appreciated, to judge from the appetites displayed.

Between three and four o'clock the day's work was ended, leaving ample time for golf, swimming, visiting the cities (only five miles away), and other recreations. There is a nine-hole golf course on the post; guest cards were available at many of the country clubs nearby. During the week-end recess, from Saturday noon to Monday morning, a number of the officers took fishing trips to some of Minnesota's numerous lakes.

Occasionally there were changes in the regular schedule as outlined above. One morning a demonstration of methods of evacuation was given by the students of the R. O. T. C. On a nearby series of hills, field hospital, aid stations, etc., had been set up, and a practical demonstration was given of the principles of war time evacuation. One afternoon we gathered in the open air amphitheatre to hear an address by General Summerall, the Chief of Staff of the Army. On the same day we were also pleased to have the opportunity of meeting Colonel C. J. Manly, M. C., Surgeon of the Sixth Corps Area. (Colonel Manly has recently finished his tour of duty in Chicago; his successor is Colonel J. L. Shepard, M. C.) On the final afternoon the "troops" were reviewed by Colonel Sweeney, the Post Commander.

In short, the work was so well arranged and so diversified that the course of instruction was profitable and interesting from beginning to end. It is felt that great credit is due to Colonel Skinner and Lieutenant-Colonel Hart, whose careful planning, willing coöperation, and unfailing courtesy were such as to ensure the unqualified success of any camp that they might conduct.

The material advantages of attending camp were manifold. First of all, the actual instruction received in current army medical methods; second, one hundred hours credit earned toward promotion; third, two weeks spent under healthful surroundings with ample opportunities for recreation; fourth, the numerous personal contacts made with a splendid group of fellow reserve officers from all over the middle west; and, finally, one must not forget that there is no financial loss. Full pay for fourteen days is received; even the junior offi-

cers found that they could pay for their initial outfits and mess bill, and still have some money left over.

While the above observations refer to the writer's experience at the Fort Snelling camp, similar reports have been received from reserve officers who attended camps at Custer, Grayling, and elsewhere. If you are contemplating two weeks' active duty this summer, it is advisable to put in your application early, as the number sent is restricted by the appropriations available, and vacancies are usually filled well in advance of the date of the camp.

Reserve officers from Michigan who attended the camp at Fort Snelling, July 7-20, 1929, were: Colonels G. C. Penberthy, H. R. Carstens; Lieutenant-Colonels A. E. Harris, M. H. Deffenbaugh, E. P. W. Richter; First Lieutenants G. S. Bates, F. H. Top, E. G. Walker, P. C. Gittins, all Med.-Res.; First Lieutenant George Carlson, Dent.-Res.; Second Lieutenants C. G. Cates, H. Morris, E. L. Veasey, MA-Res.

PROPHYLAXIS AND TREATMENT OF LOBAR PNEUMONIA*

D. W. FENTON, M.D.†
READING, MICHIGAN

The Medical Science of today is made up of the experiments and experiences of men in all the ages of the past. Little by little at first but with ever increasing speed and with astonishing rapidity during the past fifty years was the sum total of human knowledge in the healing art built up. The reasons for the rapid evolution of medical science during the last century and more especially the last half century, are many; among which, perhaps the greatest, is the substitution of experiment and correct observation and recording of actual facts, for mere theorizing and the attempt to make facts fit the theory; in other words, the substitution of the inductive for the deductive method of investigation of facts at our disposal. Along with this change have come the enormous advances in the cognate sciences to medicine, chemistry, physics and the wonderful revelation of instruments of precision; the microscope, the X-ray and hundreds of others have had a wonderful part in presenting and recording the facts of science. To this knowledge every man who has worked in this fascinating field for no more than a year must add some knowledge that he should pass on to his colleagues.

So, while I have nothing new to present to those who have kept in touch with the literature of the day, the experience that I have had must be my excuse for this brief paper. During the more than half century which I have spent in the practice of medicine, I have seen many new theories of the etiology and treatment of pneumonia brought to the front, most of them only to be thrown into the discard, and a broad view of the situation would not indicate that we have made any phenomenal advance in the prophylaxis or treatment of this treacherous and dangerous disease as a whole. It still kills more people than tuberculosis; chiefly because tuberculosis has been largely brought under control and its toll of deaths cut off by more than half. No such triumph can be claimed in the case of penumonia. We know, it is true, that it is a communicable disease and that we can, by cleanliness and strict hygiene, prevent whole families from being prostrated by it as we used to see them fifty years ago. It attacks all ages and conditions of life, from the infant in arms to the gray-haired grandparents. It is apparently just as apt to attack the strong and vigorous man who has not been near a case of penumonia, as anyone else. It is especially prone to become prevalent during or after a cold wave in winter; yet it may occur in the hottest weather in summer. I well remember one case many years ago in which the excessive heat, apparently, was the reason for the fatal issue. We simply

*Read at the regular meeting of the Hillsdale County Medical Society, March 25, 1930.

†Dr. D. W. Fenton, Reading, Michigan, graduated from the Detroit College of Medicine in the class of 1876, and has been in general practice ever since. Dr. Fenton writes us that he is eighty-one years of age, and that he has "no hospital connection except sporadically." The doctor is secretary of Hillsdale County Medical Society. The Journal M. S. M. S. congratulates the doctor upon his long and useful career and extends a welcome to him as a contributor to its pages.

could not keep the patient comfortable by any means in our power at that time.

The older writers gave their principal attention to the marked changes that take place in the substance of the lung; the pronounced congestion and stasis of blood followed by an exudate that blocks up the air cells, in a whole lobe or a whole lung. But today, we look behind all this and realize that this inflammation is but the local manifestation of the sinister work of a certain bacillus, the pneumococcus. Also that other micro-organisms come to the aid of the coccus and add their evil work to the mischief begun by the penumococcus. We know also, that the penumococcus circulates in the blood stream and in some cases rapidly affects the heart. In fact, in my experience it is always the heart that gives out first. Rarely do patients die of insufficiency of active air cells except in double pneumonia.

What, then, is our duty in a case of beginning or even threatened pneumonia? Is there any drug or agency that combats this dangerous and so often fatal disease? Well, first, we must put the patient in a condition to enable him to bring all his natural powers of defense into play. That is, he should, if possible, be in a large, well-lighted, well-ventilated room, giving him an abundance of fresh air that can be warmed at first, to the point where he will have no chilling to drive the blood from the surface inward upon the already engorged lung and laboring heart. If the lung is largely blocked up, or if the heart is already failing, he may soon be calling for more and cooler air; which he should have, by means of windows opened in such manner that they do not blow directly upon him, the air being kept in motion by an electric fan. Oxygen may be added to the air, if needed, as it can always be procured at a few hours notice from any of our great supply houses or jobbers. On the other hand, it is not good practice to place a patient who is suffering from the chill and pain of oncoming penumonia, where the cold air of winter may play over him. At this stage of his malady, he needs warmth to his surface and many good practitioners urge the constant and persistent application of hot fomentations to the chest to keep the sluggish blood moving in the congested lung and aid the already over-taxed heart. My own custom, however, has been to use, as an outward application, the cotton batting jacket, cut like a vest and covering the whole chest. Another essential, is *absolute rest.*

In the earlier stages of the attack, pleurisy may cause intense pain, greatly increased by coughing. Here morphine, or, better, codeine, may be used, preferably by hypodermic. Opiates however, except for the relief of severe pain or cough, usually at the outset of the attack, should not be used because of their depressing effect on the respiratory center.

But what of prophylaxis? In my opinion in all cases of threatened pneumonia, moderate doses of quinine should be administered. Why? First, because we know that it acts as a powerful germicide in the blood, capable of killing the malarial plasmodium. There is no reason why it may not aid in the destruction or at least inhibition of the action of the pneumococcus; while it certainly is an active tonic and in full doses is capable of markedly reducing temperature. But I wish especially to call attention to the action of one drug that we hear little about in recent literature and that is *creosote carbonate.* In my own experience, this agent has seemed to be almost as specific in pneumonia as quinine is in malaria. Why? Dr. Thomson of New York in his classical work "Clinical Medicine" attributes this effect to the extreme sensitiveness of the pneumococcus to *creosote* in any form. At any rate, it has been my experience, for many years, that it has a wonderful effect in combating the disease; often arresting it in the earlier stages, and controlling it later. But it must be given in adequate doses. My own custom is to begin its administration in capsules, size No. 0 (or No. 00 in a large person), filling the main part of the capsule with a dropper and sealing the capsule by drawing a tooth-pick, dipped in water, around the edge of the cap, which will effectively seal the capsule so that the filled capsules may be transported anywhere. This will give about 9 grains in the No. 0 Capsule or 10 grains in the No. 00. These can be given every four hours with plenty of water, are non-toxic and in my experience, are non-irritating to the stomach. In case of children or those who cannot readily swallow a capsule, it can be given as an emulsion with Lilly's coco-quinine after thorough shaking, of course, in appropriate doses. This gives us the tonic and germicidal effect of the quinine along with that of the creosote carbonate.

Of late, it is my custom to begin this form of treatment at once when there seem to be premonitory symptoms of penumonia, and continue until it is aborted or has gone on to the crisis.

Close watch should be kept on the heart and at the first symptoms of weakness, cardiac tonics, digitalis, strophanthus, caffeine or lily of the valley in reliable form, should be administered. In drinkers, alcohol should be used in moderate doses, taking care not to push it to the extent of getting its depressing effect. Ammonium carbonate in the form of the aromatic spirits is most useful and squill in small doses for its tonic effect on the heart and its expectorant effect, is very useful. Cough in the later stages is best controlled by such mild sedatives as hyoscyamus rather than the opiates.

Diet in the late periods of the disease should be nourishing but light and easily digested, as—toast, custard, omelet, ice-cream, or, if desired, a little broiled steak or fish. Also, the various cereal foods and oranges or grapefruit if desired. I have had no experience with the various vaccines and serums, but even if they were used I should not neglect the above line of treatment which has often, in my hands, seemed to arrest oncoming pneumonia and to save the day in seemingly hopeless cases. Of course, the function of the bowels must be kept up and the kidneys flushed by an abundance of liquids, especially milk. As one form of prophylaxis, the treatment by the creosote carbonate seems to be indicated as soon as signs of impending pneumonia appear; not waiting for it to develop, thus often forestalling the onset of the disease in its incipiency. Later, in fully developed pneumonia, every effort must be put forth to sustain the powers of life until the crisis, if in a young person. Digitalis, aromatic spirits of ammonia, caffeine, even oxygen, if there is cyanosis; every effort to hold the failing strength, which is, after all, the failing heart. While the heart carries on, fairly well, the general circulation, there is hope; even if a whole lung is hepatized, we may still win the day and pull the patient back from the very shadow of death.

It is astonishing how, by careful treatment and attention, we sometimes win out after seemingly all hope is gone. Clear in my mind is the case of a frail man of 60, though in appearance he was nearer 70, which I have no doubt indicated his real power of resistance. One lung was completely blocked; and he was unconscious, so completely was he overcome by the poison of the pneumococcus. I was fortunate in having with me a trained nurse, and a good one; who had been the heroine of many a battle with death. The patient's respiration was bad, though fortunately his pulse remained surprisingly good.

The nurse said, "It is useless to torture the poor old man with medicine or food. See! There is the Cheyne-Stokes respiration—a fatal symptom!"

"Yes," I said, "I see, but his pulse is still pretty good. I have never seen a patient die with a pulse like that. Let us hang on to him for a few hours longer at least." "All right," said she, "I am game, if you are." So, she remained at his side another night, continued the nourishment, which he took automatically, and the treatment. And to her delight and mine, when daylight came, he was conscious and the Cheyne-Stokes respiration had disappeared to return no more. He went on to a slow but uninterrupted recovery, and lived for years afterward.

The above case shows how, even in the aged, we may sometimes snatch victory from apparently certain defeat.

The foregoing is not intended to discredit any of the more recent advances in the treatment of pneumonia. By all means let us have all that observation and the best experimentation can give us. But *it is a plea* not to neglect a form of treatment of known value, that can, so far as we know, be used along with any other therapeutic plan.

Oxygen should not be neglected if cyanosis appears, or difficulty of respiration complained of. It may be used with the tent, or direct from the tank by means of an inhaler. All the resources at our *command* should be employed; because if the patient survives the crisis, especially if he be young, the tendency is to recovery, if the powers of life are not too far exhausted.

Much of what I have suggested will be almost a matter of routine in a modern hospital. But unfortunately, many of our cases will be debarred from hospital advantages by reason of being too ill to be moved when *complete rest is one of the prime essentials;* or by financial reasons. We must treat them when and where we find them, in the

lonely farmhouse, or the hovel of poverty, as well as in the homes of the well-to-do.

CONCLUSIONS

I. In quinine, we have one valuable germicide with which to combat the pneumococcus in the blood stream.

II. In creosote carbonate, we seem to have another, still more powerful, which can be used in all stages of the disease and is not toxic within ordinary limits.

III. This mode of treatment seems to arrest and abort pneumonia in the early stages and should be continued, unless in case of some opposing idiosyncrasy, throughout the course of the illness.

IV. Quinine and creosote carbonate seem to act as prophylactics. Therefore, it has been my custom more recently to use them at the first threat of an oncoming pneumonia.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M.D., Commissioner
LANSING, MICHIGAN

WANTED—A PHYSICIAN—A town of 500 population, we are without the services of a physician. Our nearest doctor is ten miles away and there are times when he cannot get here at all. We believe this is a good location. Can you tell us the name of some doctor who would be willing to come here?

WANTED—A LOCATION—I am a recent graduate of the medical school at —— and am anxious to find a location. I will be willing to live in the country. Can you tell me the name of a town that is without a resident physician?

The mail bag of the State Department of Health frequently carries such an appeal from residents of towns in which no physicians are located and as frequently it will turn out a letter from a graduate of a medical school who wants a location for his new shingle. A survey of towns having no resident physicians was made in the State Department of Health office recently, as the sequel of another study.

One county seat, Atlanta in Montmorency County, is reported as being eighteen miles from a physician and the president of the village says that a visit by a physician costs a resident fifteen dollars. One hundred miles away in Baldwin, the county seat of Lake, the people pay a similar amount to be treated.

Posen, on the east coast, is isolated in a bleak section in which there are only thirty-seven doctors in nine counties. A thirty mile drive is necessary for the doctor in Alpena to reach Posen and a Posen resident, when he recovers from illness, must face the discouraging aftermath of a bill for forty dollars for each trip the doctor made.

In the southwestern half of Wexford County, twelve miles from the nearest physician and twenty miles from Cadillac, is the village of Harrietta. Its population of two hundred twenty-six people is without medical care entirely when the roads are impassable, and under the best conditions wait from one to five hours for the doctor's car to cover the distance from Mesick to Harrietta. The president of the village comments on the lack of a resident doctor:

"It is my belief that this village and surrounding country would support a good physician. The trouble has been with a poor doctor coming in who has not had sufficient practice or knowledge for a general physician. Therefore they have to have another physician for certain cases and so they patronize the outside physician for all cases."

Arenac County, on Saginaw Bay, is directly north of the well-settled county of Bay. Here, however, begin the scattered settlements and sand flats of the north country. Five doctors are located in the southern half of Arenac County but the northern half of the county has no resident doctors. In this section, Turner and Twining are villages of two and three hundred people who must go from seven to ten miles for medical care.

Below is the list of villages in the state that are without resident physicians.

Town	County	Population (1920 Census)	Nearest Physician Miles
Ashley	Gratiot	596	14
Atlanta	Montmorency		18
Baldwin	Lake	471	12
Baroda	Berrien	223	5
Boardman	Kalkaska	311	10
Boyne Falls	Charlevoix	241	10
Clifford	Lapeer	327	8
Douglas	Allegan	305	2
Eagle	Clinton	100	5
East Lake	Manistee	675	5
Fountain	Mason	222	13
Freesoil	Mason	210	14
Fruitport	Ottawa and Muskegon	321	5
Gaastra	Iron	911	5
Galien	Berrien	460	6
Harrietta	Wexford	226	12
Lake Ann	Benzie	67	
McBride	Montcalm	220	
Mecosta	Mecosta	297	5

Millersburg	Presque Isle	243	10
Mineral Hills	Iron	384	3
Oakley	Saginaw	201	4
Otter Lake	Lapeer and Genesee	325	6
Owendale	Huron	274	6
Perrinton	Gratiot	419	2
Pierson	Montcalm	164	2
Posen	Presque Isle	190	30
Stanwood	Mecosta	273	10
Sterling	Arenac		6
Sylvan Lake	Oakland		
Turner	Arenac	236	10
Twining	Arenac	221	7
Vandalia	Cass	331	5
Westphalia	Clinton	325	8

E. D. J.

THE USE OF VITAL RECORDS

There has been an enormous increase in the number of requests received in the Bureau of Records and Statistics for certified copies of records of births, deaths, marriages and divorces for legal use. When the keeping of the records was transferred from the office of the Secretary of State to the Michigan Department of Health in 1921, one clerk spent from two to four hours a day on this work. It now requires the full time of two clerks, with additional assistance at frequent intervals.

Certified copies of records are furnished for many purposes, to prove age to vote, contract, hold office, marry, or secure a working permit, to prove right to inheritance, insurance, compensation, and pensions, and to prove citizenship for voting and passports. W. J. V. D.

CHILD HYGIENE NOTES

The new study dealing with births survived by the mothers is progressing rapidly. Physicians in Ingham, Barry, Eaton, Cass, and Berrien counties have already been visited. It takes less time to secure the data than was necessary in the maternal mortality study.

Child Care classes are being conducted in Tuscola County by Bertha Cooper, R.N., of the staff of the Bureau of Child Hygiene and Public Health Nursing. Gratiot and Livingston Counties are also having child care class work, carried on by Julia Clock, R.N., and Nell Lemmer, R.N.

Esther Nash, R.N., and Charlotte Ludington, R.N., are in Calhoun County, assisting in the diphtheria immunization clinics.

A meeting of the State May Day Committee was held in the office of the Director of the Bureau of Child Hygiene and Public Health Nursing on March 12, 1930. Representatives of the following state organizations were present: Michigan Congress of Parents and Teachers, League of Women Voters, Child Study Association, Federated Women's Clubs, Michigan Division, American Association of University Women, Michigan Tuberculosis Association, Women's Auxiliary, State Medical Society, and the Michigan Department of Health.

Plans were made for the activities which will mark May Day, 1930, as National Child Health Day. L. R. S.

SMALLPOX

In view of the present interest in smallpox, the paper on "Smallpox" read by Major A. P. Hitchens, M.C., at the Ninth Annual Public Health Conference held in Lansing is especially interesting. We quote the summary of Major Hitchens' paper:

"1. Systematic vaccination has eradicated smallpox from the Philippine Islands.

"2. Before 1898 smallpox killed 40,000 of the Filipino peoples every year. During 15 years of American administration, the smallpox deaths were reduced to less than 1,000 a year.

"3. Then during a period of Filipino control of the government, vaccination was neglected. In about four years, the unvaccinated children began to fall victims of smallpox. In the next three years (1918, 1919, and 1920), 72,740 persons died of smallpox.

"4. In the third year of General Wood's administration (1924), there was but one 'indigenous' death from smallpox, and in the following year there were none at all. The fundamental reason for this was General Wood's frequent tours of inspection, personally checking up the work of health officers and vaccinators, especially in remote places likely to be neglected.

"5. Since smallpox has become so rare in the Philippines, and since many of the Filipinos are very susceptible to other exanthems, differential diagnosis is sometimes difficult. In puzzling cases Paul's rabbit cornea test may be helpful.

"6. The vaccine virus used in the Philippines is prepared in the Bureau of Science; it is a desiccated vaccine and maintains its potency for a long period even at tropical temperatures.

"7. In many laboratories, research upon the vaccine virus is producing interesting results. Using Noguchi's testicular method, Armstrong has produced a heat resistant strain of the virus; Nicolle is producing a bacterially sterile vaccine for practical use by propagating it in the brains of rabbits; certain workers are growing the vaccine in artificial culture. For practical use in the control of smallpox, the calf skin virus now

on the American market is a highly satisfactory product.

"8. The factors of a properly performed vaccination, in the order of their importance, are as follows:

a. No shield or other covering strapped on;
b. Leake's multiple pressure method for making the insertion;
c. Cleanse the skin by gentle wiping with acetone;
d. Vaccinate on the arm and not on the leg;
e. Make primary vaccinations in the second six months of life.

9. Postvaccination tetanus tends to develop only in severe primary vaccinations, performed with large insertions, and dressed with some type of shield or covering strapped to the site.

"10. Postvaccinal encephalomyelitis, a disease new to medical science, has been reported as the cause of illness in 93 cases in England and 150 in Holland, with death rates of 50 and 35 per cent respectively. Even in Holland, where this disease has reached its greatest prevalence, there has been in children under one year of age but one case to 27,405 vaccinations.

"1. The evidence at hand indicates that the cause of postvaccinal encephalomyelitis is not in the vaccine virus. Its cause is at present unknown. 'Thus far the countries in which vaccination is widely resorted to in infancy have reported few and only sporadic cases of the postvaccinal nervous malady (Flexner).'

"12. A properly performed vaccination, using potent vaccine virus, always produces a 'take.' In an immune person the evolution of the lesion is accelerated.

"13. The history of smallpox and vaccination in the Philippines furnishes incontestable proof that vaccination prevents and can eradicate smallpox."

INDUSTRIAL HYGIENE NOTES

The information gathered in the industrial health survey being conducted by the Bureau of Industrial Hygiene is enlightening as to the rapid growth and the more exclusive nature of organized health work in industrial and mercantile establishments.

Officials in industries are beginning to realize the social and economic value of more complete preventive medical service in their establishments and there is an increasing willingness for coöperation on the part of all concerned in putting such measures into practice.

While the surveys, inspections and conferences have reached only about 150 corporations, their range as to types and conditions gives a fairly good cross-section of the health service—medical and surgical—now being conducted in this field, and they afford much interesting and helpful data.

Some features of health service in which most notable progress has been made are:

Closer medical supervision, with less responsibility left to nurses for conducting the work in the plant first aid rooms; employees are being given more instruction on personal hygiene.

Physical examination of all workers on entering employment is a requirement given increasing emphasis, to facilitate proper placement and to check up on incipient ailments.

A better understanding of the function and value of visiting nurse service, that it should be under the supervision of a physician.

The attempt to establish closer coöperative relations with the family physician of the employees, and to urge attention to correctable defects.

Better means for early detection of tuberculosis are being provided and infected workers are being directed to the proper agencies for care.

Aid in rehabilitation of injured employees, officials coöperating with the government agencies on this effort.

F. A. P.

MOUTH HYGIENE ACTIVITIES

The activities of the Bureau of Mouth Hygiene for 1930 started with the Annual Public Health Conference at Lansing, January 8-10, which was very well attended and afforded excellent opportunity for conferences with public health workers.

The time from January 12 to 15 was spent in Chicago, attending the State Society Officers Conference, Midwinter meeting of the Chicago Dental Society and Conference of the Dental Health Education Committee of the American Dental Association.

January 18 the director addressed a Zone meeting of teachers and parents in Macomb County; January 21 groups in Central State Teachers College at Mt. Pleasant; January 22 Parochial and Public Schools in Mt. Pleasant and Mt. Pleasant P. T. A.; January 23 County Normal in Evart; Jan-

uary 25 the County School Officers of Lenawee County; and January 31 an all day discussion of mouth hygiene with a group of nurses and physicians in the Public Health Training Station in Lansing.

As the closing feature of this discussion the children in a school room on the edge of Lansing were examined and a physician remarked: "If you had talked about these things for six months I could not have realized their importance as it was brought out in this actual examination." This demonstration always impresses upon those present the almost unbelievable amount of chronic infection in the mouths of school children and the large number of teeth which look perfect but already have cavities which the mirror and explorer show up.

February 1 and 8 were again spent in zone teachers and parents' meetings in Macomb County. County School Commissioner Lee is so interested in public health that he has arranged to have all his teachers reached by lecturers from the State Department of Health.

The greater part of February and March has been taken up with lectures and demonstrations in County Normals in St. Johns, Ithaca, Mason, Charlotte, Howell, Bay City, Saginaw, Bad Axe, Caro, Lapeer, Big Rapids, Fremont, Hart, Ionia, Stanton, Flint, Pontiac, Jackson, Blissfield, Coldwater, Bridgman, Allegan and Marshall. In addition, the Bell Telephone Company employees in Detroit, Mothers' Club in Fremont, Olivet College Assembly, Alma Chamber of Commerce, Alma P. T. A., Belding P. T. A., and Pontiac Civitan Club were addressed.

Genuine interest and appreciation have been an almost universal experience and there is ample evidence that the seed being sown is becoming more fruitful each year.

W. R. D.

ENGINEERING NOTES

The state plumbing code is still in the hands of the committee, having been changed drastically since it was first drafted. From a more or less ideal set of minimum regulations in accordance with present day approved municipal practice, the code has become a simple list of requirements applicable directly to the localities not now covered by any type of plumbing supervision. In the mind of the committee, the same process of education of public opinion to an appreciation of the necessity of plumbing regulations will have to be carried on in the small towns and rural subdivisions that has been accomplished in the cities.

Work is almost completed on the location of the line of the outfall sewer at the new state hospital for the insane near Saline. A topographical survey of the land has already been made.

The Kalamazoo State Hospital Colony is to have a sewage treatment plant. Plans have just been drawn up, specifications will be ready in a few days, and bids for the construction will probably be advertised for within the month.

The State Administrative Board has given its approval of the construction of a joint sewage treatment plant to care for the Traverse City State Hospital and Traverse City, and the project is to be voted upon at the spring election. If the city votes against the combination plan, the state will proceed alone.

The Michigan Home and Training School at Lapeer is to have extensive additions to the sewer system this summer. It is planned to construct one and one-half miles of sanitary sewers and two and one-half miles of storm sewers.

Negotiations are being carried on by the city of Flint and the board of the School for the Deaf at Flint looking toward connecting the sewers of the school system with the city system.

Plans are being prepared for new sewers and a sewage treatment plant at the Girls' Vocational School at Adrian.

Plans have also been started for a sewage disposal system at the Branch Prison at Marquette.

E. D. R.

HEALTH EDUCATION

The special program of lectures and demonstrations carried on in forty-nine of the fifty county normal training classes in the state will be completed in May. Five members of the Department staff have given the course, two from the Bureau of Education, two from the Bureau of Child Hygiene and Public Health Nursing, and one from the Bureau of Mouth Hygiene.

The series consisted of five lectures and accompanying demonstration work, each speaker spending at least two class periods in each normal school. The topics discussed included inspection of school children, control of communicable diseases in the schoolroom, personal and social hygiene, mouth hygiene, and methods and materials for teaching health to children. All the

material presented was selected with rural schools in mind, since the county normal training classes train rural school teachers.

A total of 1,103 students will have been included in the special course when it is finished. The work is given by the Department of Health to supplement the brief hygiene course already required by the Department of Public Instruction, and to aid in making clear the practical application of the principles of hygiene to actual school health problems. M. D.

TRUTH ABOUT MEDICINE

NEW AND NON-OFFICIAL REMEDIES

Pneumococcus Antibody Solution, Types I, II and III Combined—Mulford. (New and Non-official Remedies, 1929, p. 346).—This product is also marketed in packages of four 50 c.c. double-ended vials with one complete intravenous outfit. H. K. Mulfor Co., Philadelphia.

Squibb's Dextro-Vitavose.—A mixture of Squibb's vitavose (New and Non-official Remedies, 1929, p. 244), 1 part, and dextrose, 2 parts. E. R. Squibb & Sons, New York. (Jour. A. M. A., March 29, 1930, p. 920.)

Eli Lilly & Co.—Merthiolate Jelly, Lilly; Merthiolate Ointment, Lilly.

E. R. Squibb & Sons.—Squibb's Dextro-Vitavose.

Frederick Stearns & Co.—Synephrin: Synephrin Solution "A"; Ampoules Synephrin-Procaine, 3 c.c.; Hypodermic Tablets Synephrin-Procaine.

PROPAGANDA FOR REFORM

Ephedrol with Ethylmorphine Hydrochloride gun cough mixture, relying on an opiate for its effect, and on the vogue of ephedrine for sales-appeal. The Council declared Ephedrol with Ethylmorphine Hydrochloride unacceptable for New and Non-official Remedies because it is an unscientific mixture marketed under an unacceptable proprietary name with unwarranted therapeutic claims. (Jour. A. M. A., March 1, 1930, p. 634.)

New Treatments for Cancer.—Hanson reports results closely resembling those described by Coffey and Humber, following the administration of thymus extract. Sokoloff reports similar results following the use of an extract of the suprarenal combined with iron. Charlton announces lytic effects on cancer cells following the administration of an extract of the omentum. The interest of the Coffey-Humber method, in its present stage of investigation, lies primarily in the fact that the available evidence seems to demonstrate a definite effect on cancer tissue as the result of injecting suprarenal extract into the body at points removed from the tumor. (Jour. A. M. A., March 1, 1930, p. 639.)

Causyth.—A number of German journals have contained more or less laudatory reports regarding Causyth, but these are not considered to present acceptable evidence for the value of the preparation. According to the advertising, Causyth is a "cyclohexatrienpyridinsulphonacid, derived from Pyrazol, the formula being $C_{22}H_{24}N_4O_5S$." The product has not been considered by the Council on Pharmacy and Chemistry nor has the Mallinckrodt Chemical Works, which exploits it by way of its Canadian branch, "Mallinckrodt Chemical Works Limited of Canada," requested the Council to report on it. Apparently no reports have been published in American medical journals which are confirmatory of the German propaganda. A pharmacologist who has given much attention to the action of salicylates and other drugs used in the treatment of rheumatism reviewed seven of the eight papers which were referred to in an advertising circular. He held the evidence to be unsatisfactory and uncritical and no justification for the extravagant claims of the advertising. (Jour. A. M. A., March 1, 1930, p. 656.)

Pneumococcus Vaccines Omitted from N. N. R.—The Council on Pharmacy and Chemistry reports that increasing experience has failed to demonstrate the value of pneumococcus vaccine in the treatment of pneumonia, and the prophylactic value of the vaccine has not been conclusively proved. The Council came to the conclusion that the experience with this vaccine has not afforded acceptable evidence for its therapeutic usefulness and voted to omit it, with the accepted brands, from New and Non-official Remedies. In accordance with this action the Council announces the omission of Pneumococcus Vaccine Immunizing (Gilliland Laboratories, Inc.); Pneumococcus Vaccine (Lederle Antitoxin Laboratories); Pneumococcus Vaccine, Prophylactic (Eli Lilly & Co.); Pneumococcus Antigen—Lilly; Pneumococcus Vaccine (National Drug Company); Pneumococcus Vaccine (Four Types) (Parke, Davis & Co.); Pneumococcus Immunogen (Parke, Davis & Co.); Pneumococcus Vaccine (E. R. Squibb & Sons). (Jour. A. M. A., March 8, 1930, p. 716.)

ANNUAL MEETING OF THE COUNCIL ON PHARMACY AND CHEMISTRY

The Council on Pharmacy and Chemistry held its annual meeting at the Association headquarters March 7 and 8. Extended consideration was given to the work of the newly established Committee on Foods and the proposed publication of the book "Accepted Foods." The progress made appeared satisfactory and the work appears to be appreciated by the profession, the public and manufacturers. The Council discussed the status of the streptococcus preparations for the treatment of rheumatic fever made in accordance with the method of J. C. Small: it was the consensus that, while these products are suitable for controlled investigation by qualified experimental workers, propaganda which invites their general use is not justified at this time. The Council decided that the available evidence does not demonstrate the usefulness of puerperal fever streptococcus serum. The Council decided to continue the acceptance of Type I antipneumococcic serum for New and Non-official Remedies; that Type II serum is still in the experimental stage; and that pneumococcic serum preparations representing a mixture of Types I and II pneumococci be considered unacceptable. It was decided that, while adequate clinical evidence for the potency of a liver extract must be required before acceptance, further clinical testing will not be required after a product has been shown to be active and the method of preparation shown to be satisfactory. The Council considered the rules that are to govern the use of the seal to be used by manufacturers to identify products accepted for New and Non-official Remedies or for Accepted Foods. The Council approved a proposed study of commercial allergic protein preparations and offered coöperation. The Council considered a proposed manual for the guidance of hospitals to be prepared by a committee appointed by the Council on Medical Education and Hospitals with the cooperation of the Council on Pharmacy and Chemistry. Plans for the consolidation of various committees concerned with anesthesia were discussed. (Jour. A. M. A., March 22, 1930, p 874.)

A. M. A. DETROIT CONVENTION CITY

ONE OF THE OLDEST CITIES IN MIDDLE WEST YET RECENT IN DEVELOPMENT. THE MICHIGAN TERRITORIAL MEDICAL SOCIETY, FORERUNNER OF THE MICHIGAN STATE MEDICAL SOCIETY—THE WAYNE COUNTY MEDICAL SOCIETY—THE HOSPITALS—AN INDUSTRIAL CENTER

Within a few weeks Detroit will be the center of interest for this continent so far as the medical profession is concerned. The occasion of the Annual meeting of the American Medical Association which will be held in Detroit June 23-27 renders apropos a brief sketch of the city's history. Detroit was founded in 1701 by Antoine de La Mothe Cadillac. There is a bronze tablet on the wall of a one-story brick house probably five hundred years old in St. Nicholas de la Grave, France. The inscription of the bronze tablet is to the memory of Cadillac, "Born in this house March 5th, 1658, colonizer of Canada and Louisiana and founder of Detroit where he died in 1830." Detroit is therefore two hundred and twenty-nine years old. Up to the time of the founding of what has since been the town and city of Detroit, the place was the location of a fort known as Fort Ponchartrain. On the western end of Cadillac Square stands a stone chair known as Cadillac's chair which bears the inscription, "On July 24th, 1701, under the patronage of Louis XIV the city of Detroit, then called Fort Ponchartrain, was founded."

THE MASONIC TEMPLE
Where all the activities in connection with the Annual Convention of the American Medical Association will be held.

This locality, namely the river front of Wayne County, has had a somewhat unique history inasmuch as it had been under three flags. The French occupied Detroit, giving the place its name, from 1701 to 1760. Then followed the British occupation from 1760 to 1796, when it passed into the hands of the Americans. It was subsequently in the hands of the British for a short time during 1812, when surrendered by General Hull, until retaken in Commodore Perry's victory over the British on Lake Erie in 1813. The territory immediately adjacent to Detroit was a sort of no man's land or neutral zone between the five nations Indians and the western tribes.

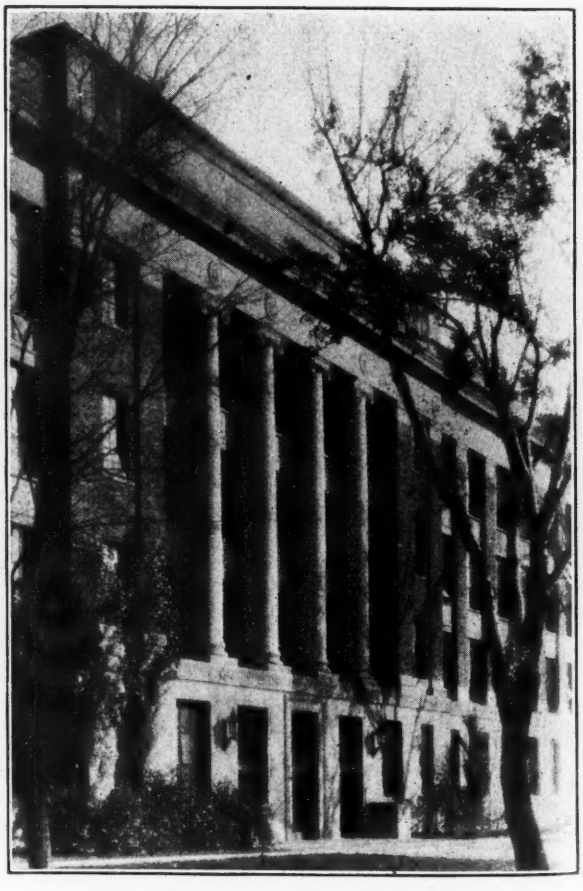
MICHIGAN TERRITORIAL MEDICAL SOCIETY

While Detroit's history goes back over two centuries and a quarter the first century and a half saw very little change in the topography of the place. From the medical viewpoint there was practically nothing in

organized medicine up to the year 1821, which was the date of the founding of the Michigan Territorial Medical Society, which was the forerunner of the Michigan State Medical Society. As the settlements were largely adjacent to the waterfront, Detroit was naturally the center of the Territorial Medical Society. And here for fuller description of the development of organized medicine and medical facilities of Michigan, the reader is referred to the forthcoming volumes on The History of Medicine in Michigan.

THE NEW UNIVERSITY OF MICHIGAN HOSPITAL, ANN ARBOR
Showing the administration building in front.

A movement was launched for the establishment of the Territorial or what has since become the State University in 1817. The University of Michigan, however, did not become an actual fact until 1837 and the medical department of the University not until 1850. Detroit also claims the initial State University, there being a tablet to that effect on the building occupied by Farrand, Williams and Clark on Bates St. The Detroit College of Medicine was first opened in 1869. The Detroit College of Medicine and the University of Michigan Medical School are the only two medical colleges in the state at the present time. It is interesting to note that Michigan has been a veritable graveyard for medical colleges, there having been no less than sixteen of these institutions within the past half century. Michigan was the pioneer in the matter of state medical education. The other colleges were all proprietary institutions. In 1918 the city of Detroit took over the Detroit College of Medicine and Surgery, which has since been operated as a civic institution under the control of the Board of Education. The Detroit College of Medicine and Surgery is at the present time one of the units



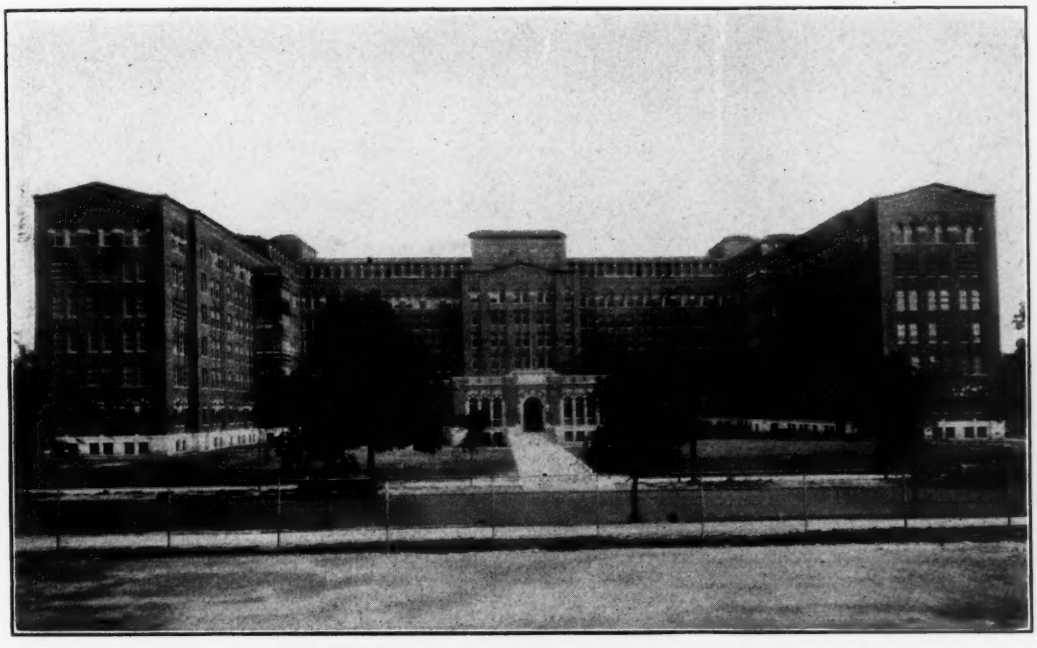
EAST ENTRANCE, MEDICAL BUILDING

of Detroit's new system of college training which also embraces law and pharmacy as well as facilities for college training through to the degree of B.A.

THE WAYNE COUNTY MEDICAL SOCIETY

The Wayne County Medical Society, which is a branch of the Michigan State Medical Society, had its beginning in 1846 with the organization of the "Sydenham" Society. This Society was disbanded in April, 1849, and reorganized into the Wayne County Medical Society. It was again disbanded in 1851 owing to the repeal of the laws under which it owed its existence and was followed in May, 1853, by an organization known as the Detroit Medical Society. This organization lasted until March, 1858. Between 1858 and 1866 there was no local medical society in Wayne County. In this latter year, however, on May 31 was organized the second Wayne County Medical Society. Its first President was Dr. Zina Pitcher, one of the nestors of early Michigan medicine. The Society continued until early in 1876, when it was indefinitely adjourned.

On August 21, 1876, however, the third Wayne County Medical Society was or-



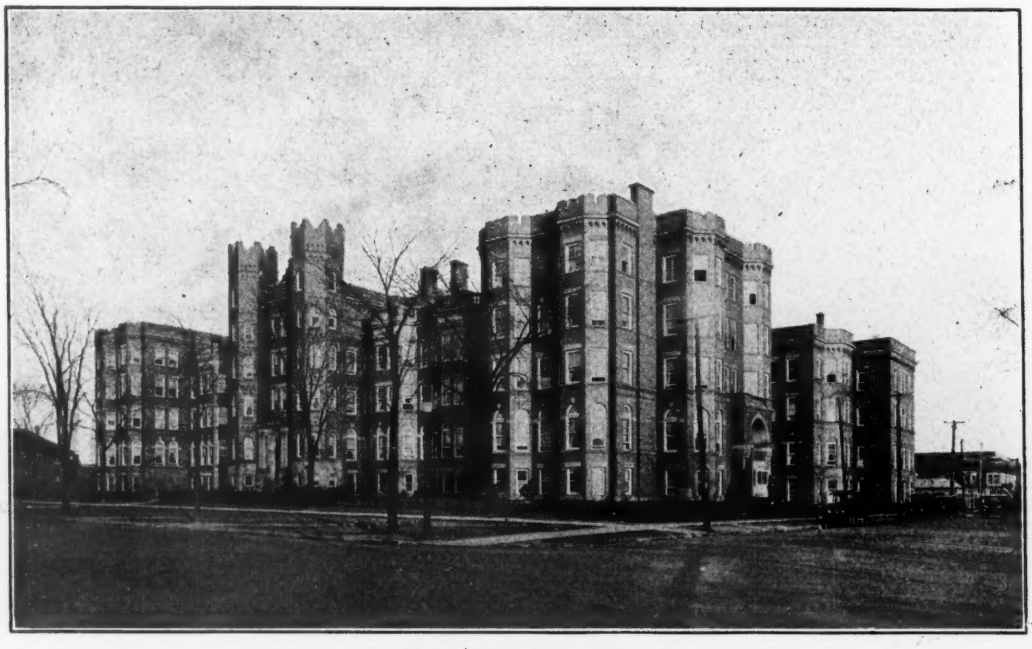
HERMAN KIEFER HOSPITAL
Showing the new building devoted to Tuberculosis, corner of Hamilton and Taylor Avenues.

HENRY FORD HOSPITAL
Located at the corner of Hamilton Avenue and West Grand Boulevard

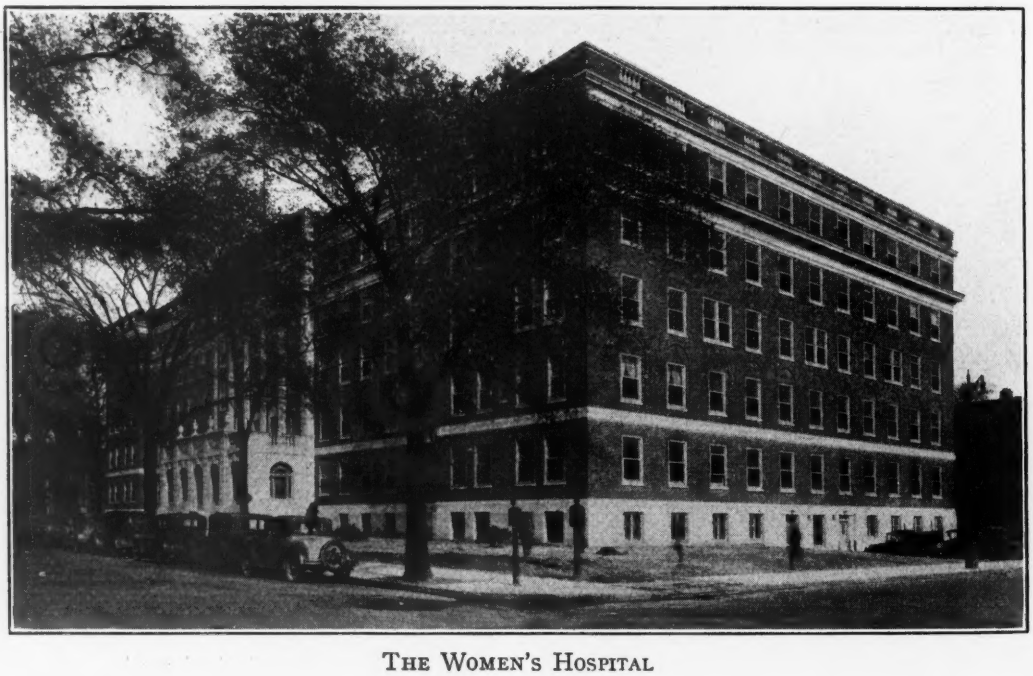
ganized and incorporated under the laws of the State of Michigan with Dr. William Brodie as its President. Dr. Brodie was known among medical men all over the United States, he having been at one time President of the American Medical Association. It is worth while to note that he was President of the Wayne County Medical Society for seven years.

In 1902 the Wayne County Medical Society took in a branch of the profession which had become separated from it in 1876, and which conducted meetings under the designation Detroit Medical and Library Association and Detroit Medical Society.

In 1906 the constitution of the Wayne County Medical Society was amended so as to make possible a Defense League as an integral part of the Society. This was a success from the beginning and met with favor with all members of the County Society. It was eventually (1910) taken over by the Michigan State Medical Society so that now



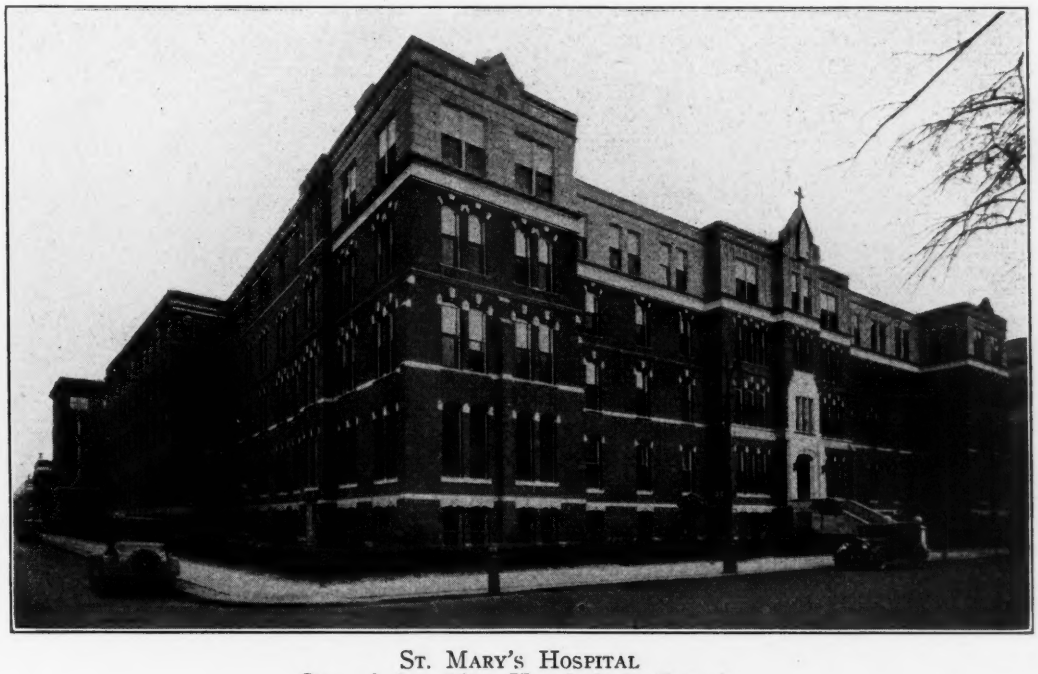
PROVIDENCE HOSPITAL
West Grand Boulevard and Fourteenth Avenue.



THE WOMEN'S HOSPITAL

the Defense League of the Michigan State Medical Society extends its benefits to all members who may require its services.

HARPER HOSPITAL
Those familiar with the old Harper Hospital will scarcely recognize this picture. It is of the new addition and faces on Brush Street so that now Harper Hospital extends from John R. Street to Brush Street.

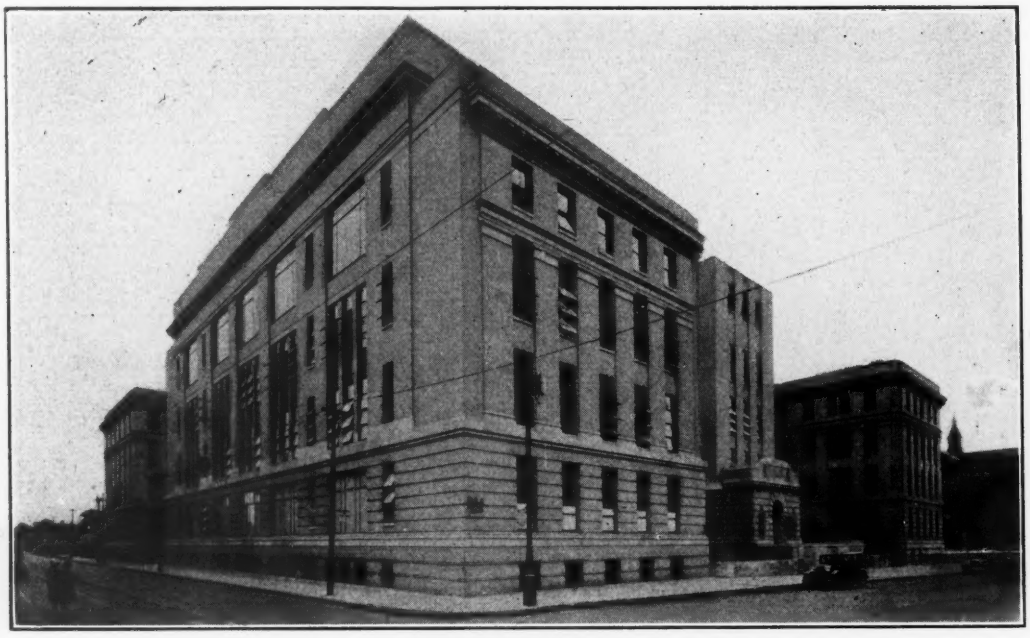


ST. MARY'S HOSPITAL
One of the oldest Hospitals in Detroit.

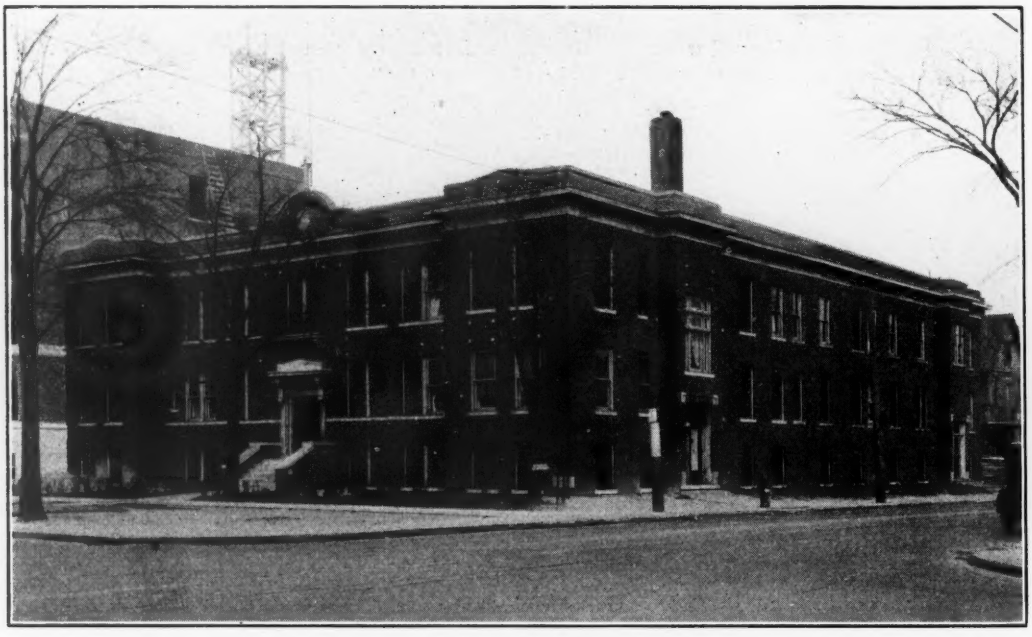
The Wayne County Medical Society published its first Bulletin in the year 1900, 1902 and 1903. The Bulletin then suspended publication for a period of about six years. In 1909 it was thought advisable to create a publication which would serve as a means of communication among members of the Society. The Wayne County Medical Society Bulletin witnessed a new birth and continues at the present time, a very creditable weekly publication of thirty pages

containing items of news, editorial matter and papers read at the various meetings of the Society.

In 1910 the Society, which had met in different auditoriums principally the Wayne County Building and on extraordinary occasions at the old Art Institute on Jefferson Avenue, elected a Board of Trustees and authorized them to purchase a permanent home for the Society which consisted of a large residence at 65 High St., Detroit, where additions in the way of auditorium and space for housing the medical library, made a satisfactory club house. The Society occupied these quarters until 1926, when club rooms were procured in the new Maccabees building, Woodward Ave. and Putnam, with the use of the large auditorium which is capable of accommodating 750 persons. At present the meetings of the Society are held on Tuesday evenings, one meeting each month being devoted to the surgical section and one to the medical section and two as general meetings.

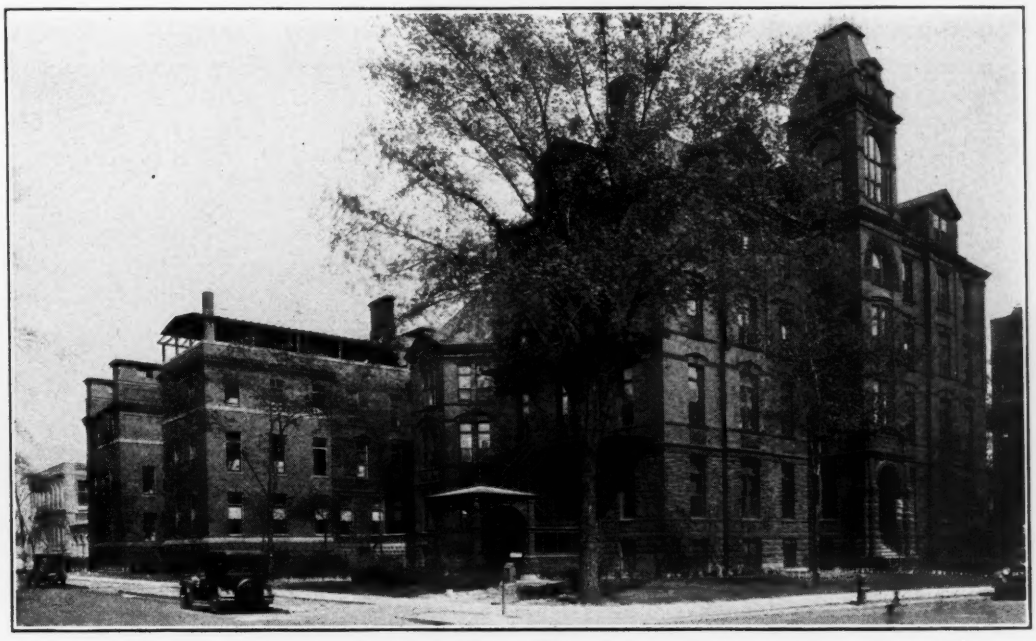


RECEIVING HOSPITAL
Corner of Clinton and St. Antoine with the main entrance on St. Antoine.

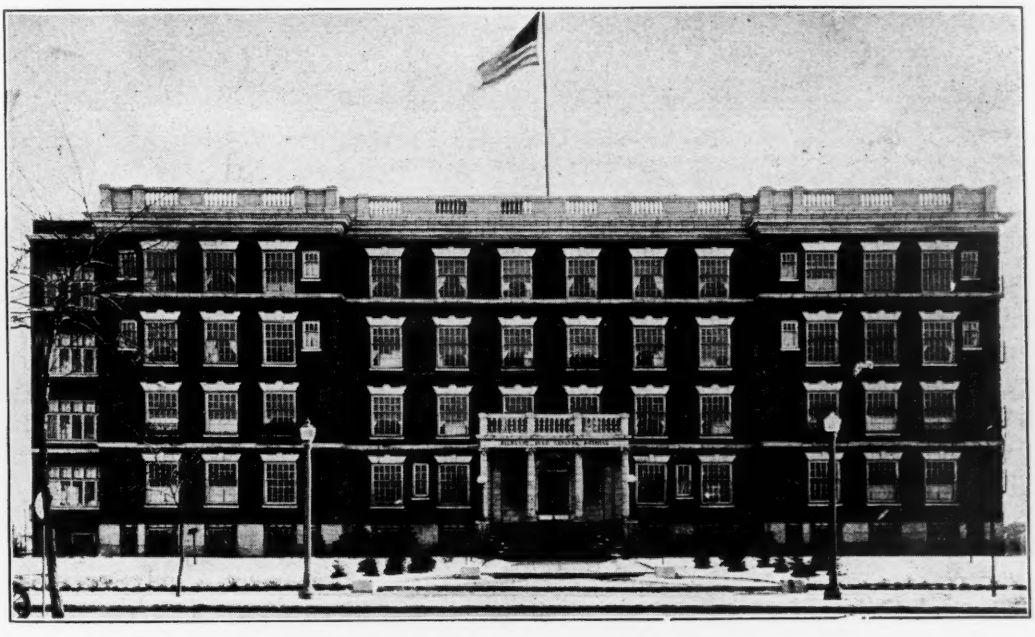


ST. JOSEPH'S MERCY HOSPITAL
Showing a portion of the new building to the left.

Any account of the Wayne County Medical Society would be incomplete were the Beaumont Lectureship Foundation omitted. In 1921-22 the Beaumont Foundation was established for the purpose of giving instruction in the medical sciences, particularly on those subjects basic to medicine and surgery. The funds for carrying on this work were obtained from the surplus contributions then in the hands of the patriotic committee of the Society. The Foundation was given the name of Beaumont in honor of the famous backwoods physiologist whose pioneer work on gastric digestion began at Mackinac Island, Michigan, in 1822. In 1924 Dr. William E. Blodgett of the Wayne County Medical Society gave the sum of $5,000 for the establishment of the Detroit Orthopedic Lecture Foundation. Both the Orthopedic Lecture and Beaumont Lectures have come to be very popular with the members of the Society and other members of the Michigan State Medical Society who have availed



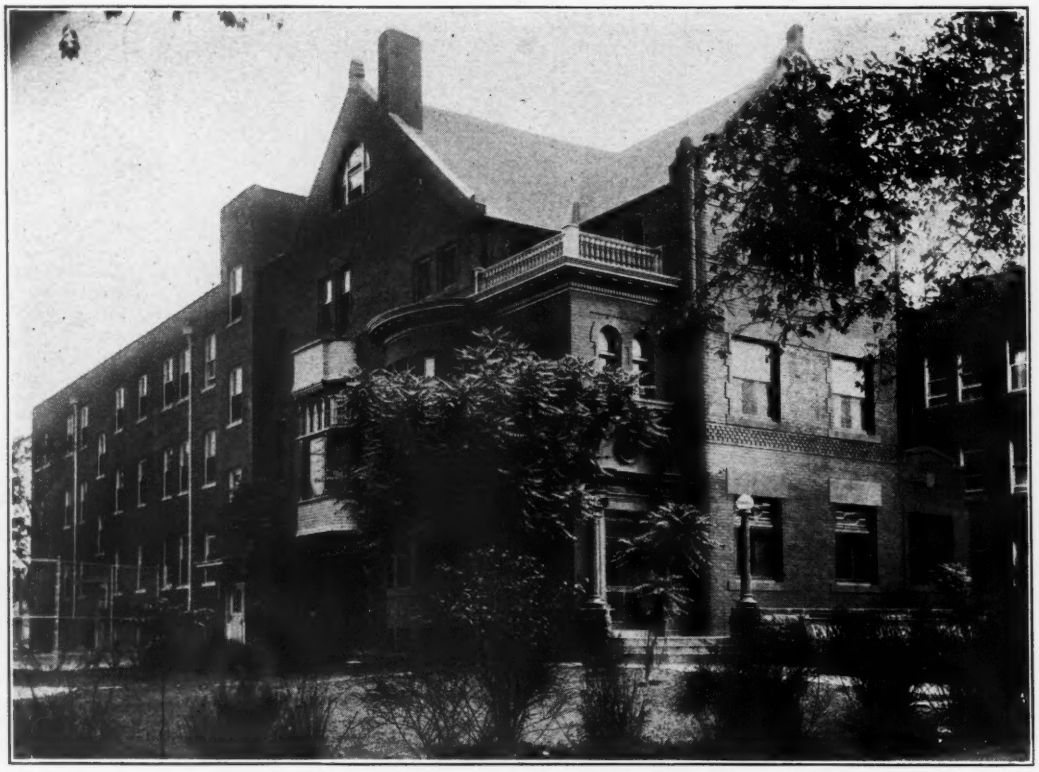
THE GRACE HOSPITAL
Located on John R. Street



HIGHLAND PARK GENERAL HOSPITAL

themselves of the standing invitation to attend these lectures each year.

With the vast increase in population which Detroit has witnesses the last quarter of a century, there has also been a marked influx of doctors, so that the Wayne County Medical Society is now the fifth largest on this continent.



EVANGELICAL DEACONESS HOSPITAL
3245 Jefferson Avenue

The problem of hospital accommodation had been a pressing one, probably not more so, however, than that of providing accommodation for school children or hotels or other necessities. The city has done well to meet the stress occasioned by coming of large masses of population. It has been estimated that at times in a single year Detroit's population had advanced in numbers that would make an extra city the size of Flint or Grand Rapids. This circumstance has brought problems of administration in the way of transportation, of fire protection, police protection, public health and preventive medicine, sudden and increased demand for extension of public works. Thus the experience of Detroit has been somewhat phenomenal and it would be a wonder if from time to time mistakes had not been made. However, with its history extending back two-hundred and twenty-nine years the expansion of Detroit has been a feature of only a little better than one quarter of a century of that time.

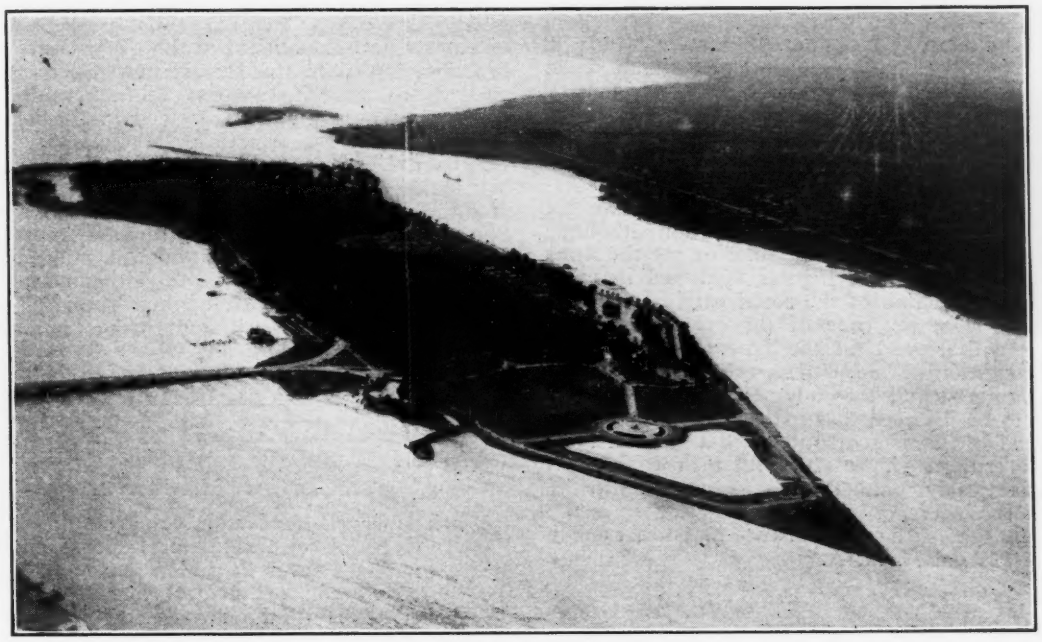
DETROIT'S POPULATION

A half a century ago the population of Detroit was 116,000; today it is estimated at approximately 1,800,000. Robert Malthus, the British political theorist, is the author of the so-called Malthusian theory of population, which is to the effect that barring such counterchecks as limitation of food supply, as disease and exposure, and as unsanitary and temperature conditions, the population of the country tends to double itself every twenty-five years. With all these checks to increase in population the census of Detroit shows an increase which the Malthusian doctrine could never have anticipated. Detroit has a polyglot population embracing in 1925 no less than thirty-five different nationalities with many languages and dialects.

Even before the advent of the automobile, Detroit had become a world-wide center for such manufactured articles as drugs and other commodities. With the advent of the development of the automobile, no city in the world has shown such marked commercial and industrial advancement. Evidences of this are to be seen on every hand: the tall skyscrapers, the erection of splendid

hotels which now adequately care for visitors to Detroit not only on business but in attendance on the various conventions held every year, for Detroit has come to be recognized as one of the leading convention cities of the United States.

The enormous increase in population has given rise to the problem of caring for the rising generation. The city has at present 234 public schools, 13 private and 121 parochial schools. There are 7,199 public school teachers and 371,902 children of school age. The annual appropriation for education is over twenty-five million dollars.



AEROPLANE VIEW OF BELLE ISLE
Detroit's nationally known playground. The Canadian shore is seen in the right distance.

REPORTS STUDIES ON EPIDEMIC INFLUENZA

In spite of considerable effort to find the causal agent of epidemic influenza, the present time finds the problem still unsolved, Dr. Peter K. Olitsky of the Rockefeller Institute for Medical Research said in a De LaMar lecture which he gave at the Johns Hopkins School of Hygiene and Public Health.

There are several factors which contribute to the existing confusion and the outstanding difficulty arises from the necessity of selecting cases of undoubted acute influenza, Dr. Olitsky stated. There has been in the past frequent failure to recognize influenza as a specific, primary disease, and therefore physicians and other scientists have failed frequently to consider as secondary infections the various bacterial pneumonias that develop in lungs injured by the influenzal agent.

Moreover the primary uncomplicated disease is usually mild and transitory; so that unless the cause is sought in the early hours it may become masked or even supplanted by associated organisms. Also, the rapid and extensive spread of influenza during pandemics makes it difficult to select for control observation cases of perfectly healthy individuals who have never suffered from the disease. Finally, to add to the confusion, a clear clinical distinction has not always been made between primary, uncomplicated epidemic influenza and many different types of upper respiratory infections, such as common colds, acute rhinitis, acute bronchitis and other indefinite conditions which may simulate a true influenzal attack.

Dr. Olitsky discussed three different agents which have been thought to cause influenza. Pfeiffer's bacilli have not yet been universally accepted as the causative agent, although there is considerable evidence to show that these organisms have some relationship to the cause of the disease, Dr. Olitsky said. The same holds true for streptococci which have been implicated by several investigators since 1917, and most recently by Dr. I. S. Falk, formerly of the University of Chicago.

Some investigators believe that the cause of influenza is a filterable virus free from bacteria of the ordinary species, or bacteria which can be cultivated artificially. Here again additional experimental evidence is necessary before a conclusion may be reached.

Dr. Olitsky and his colleague, Dr. F. L. Gates, have been studying the *Bacterium pneumosintes*. These are filter-passing bacteria found in the nasopharynx of man. There are now reported in the literature at least 30 groups of pneumosintes-like organisms mostly isolated by Drs. Olitsky and Gates and by workers studying in their laboratories. Dr. Olitsky drew attention to the fact that this germ was obtained only from cases of influenza. While there has been confirmation now and again of the occurrence of this filter-passing organism in influenza and not in other conditions, Dr. Olitsky said that he and Dr. Gates still maintain the cautious attitude they have previously expressed and prefer merely to present the experimental facts.

In conclusion, Dr. Olitsky is of the opinion that in view of the many workers engaged on the problem, it is likely that all obstacles will be overcome and an exact knowledge of the cause of the disease will be attained.—Science Service.

OF GENERAL MEDICAL AND SURGICAL INTEREST

OTITIS MEDIA AND DISEASE OF MASTOID

During the last two years, nine cases have been observed by Harold I. Lillie, Rochester, Minn., in which early involvements of the blood stream from otitic and mastoid disease have been treated by surgical measures that were relatively conservative considering the gravity of the circumstances and the otologic tradition relating to the management of such cases. During the same period, it was necessary to ablate the sinus and section the vein in six other cases that presented a quite different pathologic process. It would seem that whether or not the sinus is to be ablated and the jugular vein tied in cases in which the infection of the blood originates in the temporal bone at the time of the original mastoid operation will depend on the type of disease, the general condition of the patient, the pathologic process encountered and the judgment of the surgeon. It is not to be inferred that early mastoid operation is indicated in all cases of otitis media and mastoiditis. It is suggested, however, that in early well chosen cases early complete mastoid operation in the course of the infection of the blood stream from the disease will take care of the disease in a satisfactory manner.—Journal A. M. A.

DIVERTICULA OF STOMACH

Joseph C. Bell, Louisville, Ky., and Ross Golden, New York, give a brief discussion of the condition itself and a report of four cases. In summarizing they assert that gastric diverticula are rare and are seen most commonly in the region of the cardiac orifice. The etiology of this condition is still an unsettled question. Diverticula of the cardiac region are frequently symptomless and in themselves seldom justify surgical intervention. Those in other parts of the stomach often call for surgical treatment. The roentgen observations, in most cases, are characteristic, and in many instances the diagnosis is made by this means.—Journal A. M. A.

INFECTION OF ACCESSORY SINUSES AND UPPER RESPIRATORY TRACT IN VITAMIN A DEFICIENCY

Burt R. Shurly and R. G. Turner, Detroit, report on a study of infection of the accessory sinuses and upper respiratory tract in vitamin A deficiency. They conclude that organisms isolated from the suppurations of the upper respiratory tract and middle ear in albino rats suffering from lack of vitamin A, morphologically appearing as gram-negative cocci and classified as such by their fermentative powers, may produce a fatal toxemia in rabbits. From the observations made it appears that the poisonous effect is produced by an endotoxin and not by a toxic substance secreted by the organism. The toxicity of gram-positive organisms *(Staphylococcus aureus)* compares favorably with the toxicity of known strains of *Staphylococcus aureus*. Organisms classified as Friedländer-like, other than indole-producing strains, appear to be avirulent.—Journal A. M. A.

THE PORTER ANTINARCOTIC BILLS

In THE JOURNAL, February 8, the leading editorial concerned the Porter antinarcotic bills and called on the medical profession to oppose this legislation for numerous reasons. February 14, Congressman Porter caused to be published in the *Congressional Record,* and issued to the Hearst newspapers, and apparently to these newspapers alone, a reply to this editorial. The reply was received in the headquarters office of the American Medical Association, February 17. The wide publication it has already had makes unnecessary a repetition in our columns. It offers nothing new in evidence or argument to cause any change in the point of view expressed in our original editorial. THE JOURNAL still feels that all the power the medical profession can wield must be mustered to the defense of the right of physicians to practice medicine without further bureaucratic molestation.—Journal A. M. A.

ANOTHER NAME ADDED TO ROLL OF MEDICAL MARTYRS

When Harry B. Anderson, employee of the U. S. Public Health Service Hygienic Laboratory, died a victim of parrot fever he added one more name to the illustrious roll of medical martyrs who have given their lives in the struggle to free mankind from disease.

Yellow fever, Malta fever, bubonic plague, Rocky Mountain spotted fever and now parrot fever have claimed among their countless victims those brave fighters who willingly gambled with death in their earnest search for the deadly little germs of disease.

Yellow fever has perhaps taken the greatest toll of medical research workers, beginning with Jesse W. Lazear and ending with Hideyo Noguchi, Adrian Stokes and William A. Young. These men all died of the dread disease contracted in the course of their investigations.

Rocky Mountain spotted fever claimed the lives of Thomas B. McClintic and A. Leroy Kerlee.

Bubonic plague, the very mention of which makes men shudder, killed Alexandre Yersin and Hermann Franz Muller, who were conducting important investigations on this disease.

Tito Carbone and Allen Macfayden died of Malta fever, which is also now known as undulant fever, and which has attacked another U. S. Hygienic Laboratory worker, Miss Alice Evans, who fortunately escaped the fate of these other scientists.

Other prominent names in the list of medical martyrs are those of J. Everett Dutton, who died of African relapsing fever; Howard Taylor Ricketts, who died of tabardillo or Mexican typhus fever; and Daniel A. Carrion, who died of verrugas.

Even now, the fate of another parrot fever victim trembles in the balance. Dr. William Royal Stokes of the Baltimore City Health Department is fighting in a hospital bed the disease which he had been fighting in his laboratory a short while ago. Serum, made from the blood of patients who had recovered from parrot fever, has been administered, but whether he will win his battle cannot yet be told. His colleague, Dr. Daniel S. Hatfield, is also suffering from the disease, and Dr. Charles Armstrong, of the U. S. Hygienic Laboratory, is thought to have it but their condition is not so grave as that of Dr. Stokes.—Science Service.

THE JOURNAL

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MAY, 1930

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—*Francis Bacon.*

EDITORIAL

THE A. M. A. MEETING

The date of the annual meeting of the American Medical Association in Detroit is only a few weeks away. For several reasons this bids well to be the largest assembly of the profession in years. The central location of the city makes it easily accessible for members and visitors, not only from all over the United States but from Ontario as well. The splendidly paved roads leading to Detroit from all points of the compass will dispose large numbers to come by automobile. Special arrangements have been made so that many may avail themselves of the advantage of travel by aeroplane.

No other city on the continent is better equipped to accommodate a large gathering. Detroit Hotel accommodation is ample without crowding and the Masonic Temple is sufficiently spacious to take care of all scientific meetings as well as scientific and commercial exhibits.

The local committee on arrangements has spared no efforts in the endeavor to provide entertainment for the visiting members and their wives. The medical profession of Wayne County and of the State of Michigan are the hosts. Let each member of these organizations feel that it is a personal individual duty to see that nothing is omitted that will conduce to the comfort and entertainment of our guests.

MICHIGAN'S MEDICAL HISTORY

Every physician in the State will want a set of this two volume work when published. We take this for granted. The first volume will be ready shortly and the second will follow before the end of the summer. Subscription blanks have been mailed to each member. It will assist the publication and distribution of the work if those receiving these blanks will fill them out and mail them together with the check for $5.00 (there is no objection to making the check for $10.00, which will pay for the two volumes) to the Secretary of the Michigan State Medical Society.

The Committee on Publication of the Society will greatly appreciate such action on your part.

POST-GRADUATE MEDICINE

The March and April numbers of the Journal carried the announcement of the Post-Graduate courses in medicine and surgery and allied subjects given by the Department of Post-Graduate Medicine of the University of Michigan in affiliation with the Michigan State Medical Society. Intensive courses of three weeks duration will be given beginning on June 2, 1930. These courses will be given at the Receiving, Harper, Grace, Herman Kiefer, St. Mary's and Children's Hospitals in Detroit. The registration last June, when the first Post-Graduate program was carried out, was much larger than anticipated, with the encouraging feature that practically all registrants put in a full attendance.

Brief but intensive courses will be given at the University Hospital in general laboratory methods with longer periods for those registering for work in serology. Six courses are offered at the University, one elementary and five for those who have had

previous training in Roentgenology.

Post-Graduate work in pediatrics will not be undertaken until October, when intensive courses five days in duration will begin the first of the month and the first week of each month following. These courses, as those know who availed themselves of the opportunity last year, are so arranged as to give practical instruction in the newer phases of the various subjects.

APPENDICITIS*

Wilkie, Professor of Surgery, Edinburgh University, notes two primary acute pathological conditions affecting the appendix, namely, the acute inflammation of its wall and the sudden obstruction of the appendiceal lumen. The former has its analogue in the inflammation of the tonsil. Both appendiceal wall and tonsil are richly supplied with lymphoid tissue. Such attacks would be relatively harmless, were it not that the fibrosis resulting from the resolution stage produces a localized constriction of the lumen of the appendix. If this constriction is near the cecal end of the appendix it follows that there is interference with the normal entry and exit of fecal matter with the result that one or more fecal concretions may form. Thus the appendix is left in a condition favorable to acute appendiceal obstruction.

Regarding acute appendicular obstruction Wilkie says: "This disease is almost invariably associated with the presence of a concretion in the lumen of the appendix, which concretion suddenly becomes impacted, either in a stenosed area, the legacy of a previous appendicitis, or at a kink due to a tacking down of some part of the appendix by a congenital fold. What happens when a concretion becomes thus impacted depends on the content of the appendix distally to the concretion at the moment of impaction. If there be any appreciable amount of fecal matter present, great tension develops as the result of putrefaction of this material, and the appendix undergoes tension gangrene, usually within twelve hours. Rupture results, and through the aperture stinking fecal content, swarming with bacteria, pours into the unprepared peritoneal cavity. A virulent and probably fatal peritonitis results."

The forerunner of this condition is frequently found in the process of gastro-intestinal examination by means of the X-rays. The presence of concretions gives the appendix a somewhat beaded appearance. Such cases are potentially dangerous if not the seat of actual pathology at the time of the examination.

Wilkie believes that infection of the wall of the appendix is in many cases blood-borne, which is substantiated by the frequency that acute appendicitis has been found to follow tonsilitis.

*The Etiology of Acute Appendicular Disease. D. P. D. Wilkie, M.Ch., F.R.C.S., Edinburgh, Canadian Medical Association Journal. March, 1930.

HEREDITY

It is said that the poet Alfred Tennyson debated the matter of naming his eldest son after himself but concluded not to do so with a brooding, "Suppose he turned out to be a fool." Another prominent British peer comes forth with the declaration that the son of a clever man is as likely to be a fool as not.

Sir Francis Galton, a relative of Darwin and noted student of heredity and eugenics, claimed that the son of a judge had five hundred times the chance of success in life as an ordinary mortal. Galton based this opinion entirely on heredity and did not take into consideration such factors as education and social heredity or environment. There is a tendency to underestimate the advantages of good environment and cultural influences in their effects upon offspring and to emphasize unduly the spirit of the poet Henley:

"Who says that we shall pass, or the fame of us fade and die,
While the living stars fulfill their round in the living sky?
For the sires live in the sons and they pay their fathers' debt,
And the lion has left a whelp wherever his claw is set;
And the lion and his whelps, his whelps that none shall brave,
Is but less strong than time and the great all whelming grave."

COUNTING THE COST

It may be some satisfaction to the medical profession to know that the cost of medical care is not the only matter to be subject to investigation with a view to finding a remedy. A survey is being made by Johns Hopkins University Law Department into the high cost of law suits, legal advice and such matters. The Institute of Law at Johns Hopkins purposes carrying out the investigation more thoroughly than bar associations can spend the time to do. The preliminary findings, it is expected, will be reported in about a year's time. Probably before the investigators complete their work they will find it to be more time consuming than that of the Committee on the Cost of Medical Care. "The Law's delay" was felt as a patience-exhausting custom in Shakespeare's day.

However, if these investigations are carried far enough to include the high cost of living in general and if the outcome will be a general decline in the cost all round, doctors need not worry.

"A MEDICO-LEGAL COMMISSION"

There appeared in one of the Detroit newspapers a few weeks ago an announcement in the shape of what was evidently an advertisement to the effect that one of our State Representatives purposed introducing during the next session of the Michigan State Legislature a bill to create a "State Medico-Legal Commission" which will be empowered to require that all new advances of treatment and methods in the field of medicine be submitted to the Commission by any licensed practitioner in Michigan who may originate or perfect any such new advance or method, and that it would be the duty of this Commission to "investigate most rigidly and thoroughly the new advances and treatment methods and report to the people their findings. Then the article goes on to extol the merits of a method of treatment of a Detroit doctor. As the physician referred to in this announcement is not a member of the County or State Medical Society or the American Medical Association, we make no comment.

For the information of the Representative, however, as well as of any others who may be doubtful, we wish to say that every new method proposed in medicine or surgery is thoroughly tried out and passed upon by those most competent to evaluate its merits; that this custom has been in vogue throughout the civilized world for almost a century; that the medical profession contains its own severest and sanest critics; that as soon as any method of treatment proves itself as being of real value, the people at large become the beneficiaries and that without delay. Therefore we fail to see what useful function any such commission as that suggested could perform. In this regard we quote the splendid sentiment expressed by Adams Gowan White: "No scientific discovery is accepted until it has been checked again and again by investigators working with the most rigorous and vigorous skepticism. At the court of science every prisoner is suspected until proved innocent by a cloud of witnesses before an implacable bench of unemotional judges."

EDUCATION AND CRIME

Professor Meiklejohn of Wisconsin in a communication in a recent number of the New York Times contended that education is ineffectual as a means of curbing crime, yet the crook has been found generally an uneducated person. The mental age of the normal adult outside of prison is estimated to be several years beyond the average mental age of convicts. Dr. Meiklejohn deplores the fact that education has not succeeded in banishing poverty, servitude, ugliness or untruths.

We believe that on the whole education does improve the lot of mankind. But let us be clear. What is education? Or what is the mark of an educated man? For the vast majority who do not get beyond the elementary grades, education simply means the ability to read and to write, but principally to read. There are a great many who just know how to read but who are without a stock of ideas. They are educated enough to be accessible to the demagogue or the cheap politician but not educated sufficiently to withstand him; educated enough to be led by the sensational press but not enough to protect themselves against it. There are newspapers for those who can't think and we might go even farther and say that in the case of the tabloid and pictorial there are also newspapers for those who can't read. The ability to read, therefore, does not mean that one is educated. In defining education we may be a bit old fashioned but we think Huxley's definition has still much in its favor.

"Education," said Huxley, "is the instruction of the intellect in the laws of nature, under which name I include not merely things and their forces, but men and their ways; and the fashioning of the affections and of the will into an earnest and loving desire to move in harmony with those laws."

And again, "That man, I think, has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order; ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of

the great and fundamental truths of nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of nature or of art, to hate all vileness, and to respect others as himself."

This is a broad conception of education but everyone will admit that a person so "educated" would be capable of adjusting himself to any environment in which his lot may be cast. Crime is antisocial. It is due largely (not all, however) to the lack of ability to harmonize with society.

UNEMPLOYMENT

It is estimated that there are over four million unemployed workers in the United States at the present time. The actual number may be a great deal larger. The more highly developed society becomes, the more complicated and difficult of adjustment is its economics. It is painfully evident, however, that we in the United States have been living on the fat of the land with little regard for the future. This is seen in the wasteful exploitation of our natural resources. Our standard of living has included not only the so-called necessities of life, but we have come to look upon erstwhile luxuries as necessities. We have placed ourselves under financial obligations that mortgage our future earning power. When the time comes that the demand for certain articles such as automobiles, radios, iceless refrigerators and what not is satisfied and the saturation point has been reached, workers are laid off and the unemployment situation is felt not only by the immediate unfortunates, but by the merchants and others. And it goes without saying the medical profession feel the financial stress early.

Industrial statesmanship, which is sadly wanting, would have anticipated the possibility of unemployment when times were good, and some measures would have been undertaken at least to study the possible situation with a view to a remedy. We are far behind other countries in regard to looking to the interests of the less fortunate. Both Great Britain and Germany have made strenuous efforts towards the solution of the non-employment and old age problems.

We have no panacea to offer but feel that governments might do more if membership in Congress or in the Senate were looked upon as a career requiring as much intelligence and special training as medicine or law. The election of members to Congress and other legislative positions has been of the most haphazard character and as a rule the political extrovert or the person for some reason, often other than personal fitness, who can command votes is successful at the polls.

Such subjects as unemployment, industrial statesmanship, directly concern us as members of the medical profession. We have a large share of the burden, the care of the indigent sick. The matter of preventive medicine which affects the whole nation is our concern, and beside it all, we are citizens.

YE PEDIATRICIANS, ATTENTION!

THE MODERN BABY

"The hand that rocks the cradle"—but there is no such hand.
It is bad to rock the baby, they would have us understand;
So the cradle's but a relic of the former foolish days,
When mothers reared their children in unscientific ways.
When they jounced them and they bounced them, these poor dwarfs of long ago—
The Washingtons and Jeffersons and Adamses, you know.

They warn us that the baby will possess a muddled brain
If we dandle him or rock him—we must carefully refrain;
He must lie in one position, never swayed and never swung,
Or his chance to grow to greatness will be blasted while he's young.
Ah! to think how they were ruined by their mothers long ago—
The Franklins and the Putnams and the Hamiltons, you know.

Then we must feed the baby by the schedule that is made,
And the food that he is given must be measured out or weighed.
He may bellow to inform us that he isn't satisfied,
But he couldn't grow to greatness if his wants were all supplied.
Think how foolish nursing stunted those poor weaklings, long ago—
The Shakespeares and the Luthers and the Bonapartes, you know.

We are given a great mission, we are here today, on earth
To bring forth a race of giants, and to guard them from their birth.
To insist upon their freedom from the rocking that was bad
For our parents and their parents, scrambling all the brains they had.
Ah! If they'd been fed by schedule would they have been stunted so?
The Websters and the Lincolns and the Roosevelts, you know.

—Bishop Doane

EPIDEMICS OF CULTS

After the war there was a wave of popular interest in spiritualism. Since the stock market crash the public reaction has manifested itself in the sprouting of various new cults. A Variety dispatch reports that Chicago is finding them extremely popular, particularly with "performers."

When a speculator found that the bottom had dropped out of the market, and out of his own purse too, he turned away in despair from the material things of life. Hence the sudden epidemic of cults, some apparently quite sincere, others simply new rackets. But all "put on good shows," with mysterious rites and ceremonials.

The basis of nearly all of them is the power of mind over matter. They teach that happiness lies not in yachts and motor cars, country clubs and coupon-clipping, but within one's self. Failure, misery, poverty and presumably overdue bills are only manifestations of evil thoughts. They offer a comfortable "defense mechanism" to a man who might otherwise have been kicking himself for not having followed his own "hunch" and sold out sooner. But their stock may be expected to drop with the return of prosperity.—*New York Times.*

BYRON'S DRINKING CUP

Lord Byron's former home, Newstead Abbey, England, parts of which have just been purchased for the nation by Sir Julius Cahn, in the poet's time housed a number of curious relics which appealed to his somewhat morbid fancy. A visitor, soon after Lord Byron had sold the place, saw a stone coffin in the servants' hall, and in the study "a couple of the most perfect and finely polished skulls I ever saw." Probably they were found at the same time as the one which Byron had converted into his notorious skull drinking cup. It was said at the time by some ill-natured folk that the poet had exhumed the remains of one of his ancestors purposely to satisfy that gruesome whim, but Byron has left his own record that the skull was accidentally dug up by a gardener, who had no doubt encroached on an old burial-ground of the monks.

"Observing it to be of great size and in a perfect state of preservation," the account goes on, "the strange fancy seized me of having it set and mounted as a drinking cup. I accordingly sent it to town, and it returned to me with a very high polish and of a mottled colour like tortoiseshell." The skull was bound with silver and mounted on a stand.—*The Manchester Guardian.*

SCIENCE AND THE LAWYERS

It is fortunate for the cause of culture and of civilization generally that the search for truth has not been subjected to the restrictions put upon evidence in our modern courts. When science goes out after truth it scorns nothing, however remote, that may have some bearing.

Galileo accepted the testimony of a swinging lamp to get at a truth making possible the invention of clocks. Any lawyer would have told him the lamp is not a competent witness outside of matters of illumination. And Newton gets the truth about gravity from an apple—a common pie or cider apple not to be recognized in court apart from these humble limitations. And half or more of the ponderous evidence which Darwin collected to prove his elaborate theory of the Descent of Man was the merest hearsay about creatures that never messed in the affairs of man at all.

It is only when the investigation involves the lives of men and women and the safety of society that rules are made to ignore all but the primary and directly pertinent evidence.—*Detroit News.*

THE EDITOR'S EASY CHAIR

SIR CLIFFORD ALLBUTT*

"To you Sir Clifford, in fuller measure than any one in our generation, has been given a rare privilege: To you when young, the old listened as eagerly as do now, when old, the young. Like Hai ben Yagzan of Avicenna's allegory you have wrought deliverance to all with whom you have come in contact."—Osler.

Thomas Clifford Allbutt shared with Osler the honor of having been one of the leading physicians of the English speaking world during their generation. Osler's birth, education and career, including his maturity, were largely spent in Canada and the United States, which fact has rendered him better known to the medical profession of these two countries than the subject of this charming biography by Sir Humphrey Davy Rolleston. The facts of Allbutt's career may be somewhat briefly stated. He was born at Dewsbury in Yorkshire, England, on July 20, 1836, the only son of the Rev. Thomas

SIR THOMAS CLIFFORD ALLBUTT
This picture is here printed through the courtesy of the Macmillan Company of New York.

*The Right Honourable Sir Thomas Clifford Allbutt, K.C.B., M.A., M.D., F.R.C.P., F.R.S., Hon.M.D., D.Sc. D.C.L., LL.D., Regius Professor of Physic in the University of Cambridge, Fellow and sometime classical scholar of Gonville and Caius College. A Memoir by Sir Humphrey Davy Rolleston, Bart., G.C.V.O., K.C.B., M.A., M.D., Hon.M.D., D.Sc., D.C.L., LL.D., Regius Professor of Physic in the University of Cambridge, sometime President of the Royal College of Physicians of London. Macmillan and Company, Ltd., St. Martin's St. London, and New York. Price $6.00

Allbutt, who was Vicar of the little town between 1835 and 1862. He is said to have been the first child to be born in the Dewsbury vicarage for over half a century. While himself a son of the vicarage, Allbutt had five medical uncles, including a great uncle. His academic training began in 1855 when he entered Gonville and Caius College, Cambridge, where he gained a scholarship in Classics in 1856. He was awarded the degree of M.B. at Cambridge in 1861 and the degree of M.D. in 1869. He was married during this latter year.

PRACTISING AT LEEDS

Following his graduation from Cambridge (M.B.) in 1861 he located at Leeds, where he practised for the next twenty-eight years. He was the same year elected Junior Physician to the Leeds House of Recovery (a peculiarly happy name for a hospital). Speaking of the nurses of the institution, "They were great powerful red faced women who all ate a great deal of beef and drank a great deal of beer, and lifted patients as you would lift puppy dogs." During this early period of his career Dr. Allbutt gained a great deal of experience in the diagnosis of acute fevers.

His biographer speaks of him as extremely well informed not only in all branches of his profession but in general and literary knowledge as well. Soon after settling in Leeds he became prominent in the Leeds Philosophical and Literary Society. The range of his interests extended from medicine to such subjects as "The Productive Careers of Great Men" and "The Travels of Early Peoples."

Allbutt experienced the lean years of medicine which have been and are still the lot of by far the majority of doctors, but to him these lean years were an opportunity. To quote from his biography, "Able to sympathize fully with young men in a similar position, he in later years often advised them to sow the seeds of success during these lean years by reading not only professional but good literature, and to hold on if necessary, as he expressed it, by 'eating their boots.' The habit of omnivorous reading and making critical notes on what he read, thus storing up material for future use, remained with him for life." Sir Clifford Allbutt was a student of medical history from a very early period in his career. As a result of reading during his period of waiting, was his first historical essay on The Medicine of the Greeks. It might be mentioned here that this is the first of a long series of papers on historical subjects which continued until the latter years of his life.

He had a rather striking characteristic of returning to and expanding a subject which at one time may have become the object of his study. This is seen not only in his historical essays but likewise in his writings on tuberculosis, cardio-vascular and nervous diseases.

DEVISED THE CLINICAL THERMOMETER

One of the subjects which early engaged his attention was the history of the clinical thermometer. In 1866, the taking of patients' temperatures was not a routine practice. The clinical thermometer was employed, however, as early as the seventeenth century but did not come into general use until the second half of the nineteenth century. A rather crude instrument was constructed by Sanctorious in 1638, who advocated its use in the diagnosis of disease. A clinical thermometer three inches in length and three or four lines* in diameter, the central tube for the mercury being one-half line in diameter, was exhibited at Oxford in 1684. Van Swieten used Fahrenheit's thermometer, invented in 1720, for registering temperature in the mouth and axilla. A clinical thermometer described by John Spurgin, who lived in the first half of the nineteenth century, was ten inches long and too cumbersome for general use. In 1865 Ringer published a book on The Temperature of the Body as a Means of Diagnosis of Phthisis, Measles and Tuberculosis. Wunderlich in 1868 wrote a work on Das Verhalten der Eigenwarme in Krankheiten which formed a stimulus to the study of clinical thermometry in England. Wunderlich's thermometer was nearly one foot long and was left in the axilla of the patient for from twenty to twenty-five minutes. This proved, however, a rather time-consuming process to the man with a large practice, so that until further improvements were made the thermometer was destined to be of limited practical use. In 1867 Allbutt had made a clinical thermometer six inches long which recorded the temperature when kept in the axilla for five minutes. He finally shortened it to three inches. It was marked in the Fahrenheit scale, which gave it immediate popularity in Great Britain. He in reality invented the form of clinical thermometer now in use.

*A line is one-twelfth of an inch.

THE HYPODERMIC OPERATION

While having no particular relation to the clinical thermometer, we might mention, parenthetically, that the hypodermic syringe was invented in 1844 by F. Rynd of Dublin. It did not attract attention, however, until in 1855, when Alexander Wood of Edinburgh wrote a valuable book on the subject of hypodermic injection for the relief of neuralgia, and described a syringe on the model of a bee's sting. Allbutt was the first to advocate the use of morphine by hypodermic injection in the distress and dyspnea of cardiac disease. An amusing incident of these early times was a solemn consultation in the Leeds Infirmary as to whether the physician should give the hypodermic injection with his own hands or whether the surgeon should be called in to perform this operation.

An account of the life of Sir Clifford Allbutt would not be complete if the matter of recreation were omitted. Since his days as an under-graduate at Cambridge he had been an Alpine climber and took the keenest interest in this out-of-doors pastime to the end of his long life. As he himself says, "When I felt it was possible to slip I felt it was time to give up." Dr. Allbutt was accustomed to spending six weeks of each year away from his professional duties. These vacations were spent for the most part in Switzerland or in the English Lake country or in Scotland. He maintained that the custom was a good prophylaxis against high arterial tension. He wrote rather extensively of his experiences and was for years a more or less regular contributor to the Alpine Journal.

PHYSICIAN PROTOTYPE

It is almost needless to say that a person with such a long and prominent career had met during his life-time many important personages. Allbutt was a friend of George Eliot, and it has been conjectured that he was the prototype of Tertius Lydgate of Middlemarch, which novel was published in 1872. She visited Leeds in 1868 and was entertained by Allbutt, whom she spoke of as "a good, clever and graceful man, enough to enable one to be cheerful under the horrible smoke of ugly Leeds." Those who have read George Eliot's Middlemarch will note certain differences between the character in Middlemarch and the subject of this biography. There will be found, however, enough resemblances to indicate that George Eliot was influenced by Allbutt's personality in the creation of the character of her novel.

Allbutt was favored as consultant by his peculiarly happy mental equipment. He is described as possessing not only a fine intellect and kind heart but a presence and style which marked him as a great man. The following description by Chadwick, a

former associate, describes an ideal to which every consultant might well aim. "His 'bedside manner' could never have been surpassed; in consultation he always gave the very greatest satisfaction to everyone concerned; he was always hopeful, even in the most hopeless cases, and always left the patient with the feeling that not only was there considerable cause for hopefulness, but that the patient was the one person in whom Dr. Allbutt was specially interested." F. H. Garrison, the American medical historian, in comparing Allbutt with Osler wrote, "Allbutt was, in fact, the spiritual aristocrat, just as Osler was an essential democrat in professional relations, gregarious and fond enough of people to be sometimes victimized by them." These estimates of the man are by no means incongruous.

Allbutt was much concerned over medical men appearing in courts as expert witnesses, contradicting one another about facts. In Leeds he effected a reform by getting the profession together at a meeting at which it was agreed to combine in refusing to give evidence in legal cases unless a consultation were arranged between medical witnesses on both sides before the case came to trial. From pronounced opposition at first on the part of the legal profession, it was eventually accepted as a forward movement in the furthering of justice. Any of us who has been called as medical witness appreciates what it would mean not only in assisting in a just verdict but to one's equinamity as well, were the medical witness on each side given the opportunity of consultation at so far as defining the facts of a case. Such matters as concern the study of personal injury cases cannot be elucidated by argument.

RETIRES FROM GENERAL PRACTICE

In 1889, a turning point in his professional career, Allbutt accepted a Commissionship in Lunacy and moved from Leeds to London. This meant sacrificing a much larger income for a salary of $4,000 a year. It meant also freedom from the demands of what had come to be a very strenuous consultation practice. His interests, besides cardio-vascular diseases, included also psychiatry and neurology. He wrote extensively on the subject of essential hypertension which he called *hyperpiesia.* He was the first to describe the condition which we understand as essential hypertension and to differentiate it from the hypertension associated with kidney disease. In connection with his studies on arterial tension, he at one time advocated periodic blood pressure examinations, and afterwards recanted saying that "This rule would indeed set up an epidemic of fidgets." He even advocated the treatment of high blood pressure even though it was a symptom. "Until we find the key to the metabolic lock," said he, "why not treat a symptom, if the symptom itself be a nuisance?"

Here might be mentioned his reaction to psychoanalysis. "I have had intimation again of the terrible mischief these men [psycho-analysts] do; even those supposed to be 'trained': young women with minds poisoned, family secrets dragged into the light, bitter discussions, and so on. Calamitous! It is a fashion like 'christian science,' etc. We do not realize the harm that is done by talking about things. Evil things become familiar and tolerated."

REGIUS PROFESSOR, CAMBRIDGE

Three years later Allbut was appointed Regius Professor of Physic of Cambridge, a position he held with distinction until his death. Sir William Osler held a similar position at Oxford from 1905 until his death in 1919. The academic atmosphere of these institutions was, to say the least, very congenial to two men of such intellectual background; while advancing in years neither ever grew old in spirit or mental outlook. The position at Cambridge gave opportunity for the writing and editorship of Allbutt's System of Medicine, which was his magnum opus. This work is almost as well known on this side of the Atlantic as Osler's system. Both writers were masters of unexampled diction. Allbutt was an artist in the employment of words. The materials in writing are words which the writer selects with as much skill as the artist his colors, if his language is to be in reality the flesh garment of thought. Sir Clifford Allbutt deplored the poorly written English of the Cambridge medical student of his day. "It is sad to hear it commonly said that the day of learned physicians is past, that they are gone with periwigs and bric-a-brac. And I have had already to observe to my pain that the Cambridge medical student of today is by no means 'learned'; that too often he thinks loosely, and that he does not always write even the English of t gentlemen who do the fires and the murders for country journals. On his Latinity I will discreetly keep silence."

He strongly advocated the writing of essays or theses, particularly for the M.B. and M.D. degrees. As a means of promoting greater clearness of thought and expression and to aid in a substantial way, he wrote a splendid handbook of notes on the composition of scientific papers. In this handbook, along with much sound advice, is a chapter containing gems culled from theses and examination answers, regarding which the author said that "quotations are given for the most part without acknowledgment, for obvious reasons." He disparaged the pedantic use of Latin and Greek plurals of words that had come into common use, as "asyla" for "asylums." In regard to studying models of English prose we have this: "Imitate no one but read to strengthen and enlarge your ideas, your understanding and your language." I would like to quote page 162, in which his biographer has described Allbutt's method of composition, but space will not permit. The biographer concludes, "His literary style thus had an easy grace and was attractive for its refreshing difference from the ordinary run of medical writing and on account of the occasional use of good old words. Just as he was always well groomed in person, so was he equally careful in literary expression, and with a fastidious feeling for words and phrases, chose them like an epicure."

WHO ARE FITTEST TO SURVIVE?

On the live subject of eugenics and the survival of the fittest, which of recent years has taken concrete form as birth control, Allbutt said: "We cannot tell which shall be the *fittest* till the form of the coming time is revealed. A society at one time may need bone and muscle, at another time may dispense with some of its prizefighters and need the qualities of the inner life. . . . Tenderness, gratitude, love are more to us than two legs, two arms, or two lungs; moreover, the higher gifts of the imagination may be found in the frailest or the humblest vessels. What would have been our loss had the parents of Keats or the Lambs been forbidden to marry by the common order of medical men to forbid the unions which may produce such children?"

In an address entitled "On Professional Education with Special Reference to Medicine," he concludes: "That no teacher reaches his best till middle life. Not till then does he gather the fruits of experience, or attain to a rich and vital sense of our ignorance; not till then does he wholly escape from formulæ and routine; not till then does he learn what to leave unsaid; then it is that erudition and experience mellow into wisdom." The address was partly a reply to Osler's valedictory address entitled the "Fixed Period," in which he referred to the "comparative uselessness of men above the age of forty."

VISITS THE UNITED STATES AND CANADA

Allbutt made several visits to the United States and Canada—the first in 1898, when he crossed the continent to San Francisco where he delivered a series of lectures. He was particularly impressed with the eagerness of the American mind for education for he says, "I have just returned from the United States, and I am sure we have lost three good generations in England. I found those people so quick that the moment they see there is new knowledge to be made they realize the importance of making it quickly, and they are ready to endow it. A professor said: 'We have only to go up and down in the street to get any money we want and if we are able to show them we are going to make new knowledge.' That is the spirit we want in this country."

REACTIONS

Allbutt's attitude towards certain habits is of interest. He claimed that smoking cigarettes added ten years more to the record of age upon a woman's face. He exhibited an idiosyncrasy to tobacco and was therefore a non-smoker all his life. So offensive was it to him that he was obliged often to avoid public dinners. Port wine always gave him a cramp and bouillon taken in the evening meant a sleepless night. If he drank tea during the day, he was wont to wake at 4 A. M. with a pulse rate of 160, which would after a few minutes return to normal. Salicylates had a powerful effect on him and had to be taken in small doses only. He was a moderate eater, partaking sparingly of meat. His health history was, as the case history taker would say, "uneventful" though characterized at times by symptoms that are experienced by the neurotic. He reports that one night, about fourteen years before his death, he woke suddenly and found that his breathing had stopped though he could continue to breathe by voluntary effort. This condition, which did not last long, recurred about once a year.

In conclusion, in the language of his biographer, "In early life an original investigator both in the laboratory and the wards, then a busy consulting physician, and after that for thirty-two years a Regius Professor with a world-wide reputation, he was throughout an independent thinker, a cultured man of letters, and a philosopher; but greater even than these were the character and personal influence of the man who became the undisputed doyen of his profession in this country."

On February 21, 1925, he died.

"A scholar-physician, an inspiring leader, and a beloved humanist."

J. H. Dempster

THE DOCTOR'S LIBRARY

RADIUM IN GENERAL PRACTICE—By A. James Larkin, B.Sc., M.D., D.N.B., Radium Consultant on Staffs of Wesley Memorial, German Evangelical Deaconess, John B. Murphy, Washington Park Community Hospitals, Chicago, and St. Francis Hospital, Evanston; Instructor in Dermatology (Radium), Northwestern University Medical College. With twenty-eight illustrations. Paul B. Hoeber, Inc., New York.

From the title of the book one would conclude that it was written for the general practitioner, and that was one purpose the author had in mind when preparing the treatise. Recent investigations in radioactivity have caused such radical changes in the field of physics that he believes similar changes may occur in the field of medicine and unless the medical profession in general becomes familiar with the principles of radioactive therapy, it may find itself unprepared if such changes come about. Therefore this book deals with the elements of radium therapy in order that the general practitioner may obtain a true evaluation of its possibilities and thereby more intelligently select the cases suitable for this type of treatment. It should also aid him in selecting a competent radium therapist, which is an important factor in obtaining the best results from radium therapy. The first chapter deals with the mechanics of radium, general technic, biological reactions, contraindications to treatment and the dangers of application. The remaining chapters deal with radium therapy in the various diseases under four different headings, namely, general diseases, gynecological diseases, miscellaneous tumors, carcinomata, miscellaneous skin lesions. Diagnosis is not discussed but considerable space is given to pathology in each case. The application of radium and its reaction in each disease are described in detail and there are twenty-eight illustrations. Theoretical considerations are not discussed, but a supplementary bibliography of twenty-four pages makes such knowledge available.

CLINICAL ATLAS OF BLOOD DISEASES—By A. Piney, M.D., M.R.C.P., Research Pathologist, Cancer Hospital, London, Consulting Pathologist, Chelmsford Hospital, and Stanley Wyard, M.D., M.R.C.P., Physician, Bolingbroke Hospital, and Assistant Physician, Cancer Hospital, London. With 36 illustrations, 32 in color; P. Blackiston's Son & Co., Inc., 1012 Walnut St., Philadelphia, Pa. Price $4.00.

This small atlas of slightly over one hundred pages contains thirty-two colored plates which were made from actual blood smears of the various blood diseases. The first seven plates illustrate the development of the different types of blood cells. The atlas was published particularly for the benefit of students and the general practitioner and therefore it contains in addition brief but complete accounts explanatory of the various plates. There are seven pages devoted to definitions of terms used in connection with blood diseases. The book is essentially a brief text of hematology which should be very suitable for the general practitioner, especially one who does his own laboratory work.

THE CREED OF A BIOLOGIST, A BIOLOGIC PHILOSOPHY OF LIFE—By Aldred Scott Warthin, Ph.D., M.D., LL.D., Professor of Pathology and Director of the Pathological Laboratories in the University of Michigan, Ann Arbor. Published by Paul B. Hoeber, New York, 60 pages, 1930.

Professor Warthin believes that knowledge of modern scientific investigation, rather than superstition, faith, or fear, should form a rational basis for living. With this in mind, he has formulated a credo or philosophy or life which will prove interesting to anyone without mental bias. The viewpoint is individualistic; the argument is well presented and rational. His credo in abstract form is worth quoting. "I believe in the law, in the immortality of the germ plasm and in the creative, progressive evolution of life, in the variability of value of the germ plasm through heredity and environment, in the transmission of acquired characters, and in the conscious improvement of the race through the laws of volitive eugenics. I believe that the aim of the individual life is the protection, improvement and continuation of the immortal germ plasm, and that this is best secured by self-development in the highest possible degree, through a permanent monogamic sex-partnership, with limitation of offspring towards the securing of the best possible results in the progeny, and their best preparation for the continuation of the process in the next generation. In this belief, the universe is rationalized for my intelligence and reason, I accept it with optimism, relinquishing all desire for a personal immortality, and, unafraid, believing that whatever Gods may be, the game of life will have been played squarely and according to the law."—W. T. D.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

The American Medical Association Annual Meeting, Detroit, June 23-27th.

Dr. H. N. Torrey, Detroit, will return May 1 from a winter spent in the south.

Dr. Richard R. Smith, Grand Rapids, has returned from a three months European trip.

Dr. H. S. Collisi of Grand Rapids devoted two weeks in March to visiting Philadelphia and Baltimore clinics.

Dr. William Hackett and Dr. R. J. Scott have returned and resumed practice after a few weeks spent in Florida.

Dr. G. L. LeFevre of Muskegon is the chairman of the Board of the recently amalgamated Union and Hackley National Bank.

Organized Medical Activities was the subject of the State Secretary's address before the Highland Park Physicians Society on April 3.

The April issue of the American Journal of Surgery contains an article, biographical, on Oliver Wendell Holmes compiled by Dr. F. C. Warnshuis.

Dr. and Mrs. William Appelbe have returned to Detroit after approximately two months spent at Pasadena, California.

Members are urged to engage their hotel reservations for the Detroit A. M. A. meeting. Write at once in order to secure satisfactory accommodations.

Dr. Louis Klein of Detroit has been appointed Consulting Endocrinologist of the Wayne County Clinic for Child Study in connection with the juvenile court.

The Michigan State Board of Registration in Medicine will conduct its June examinations in Ann Arbor on the 11th, 12th and 13th and in Detroit on the 16th, 17th and 18th.

Dr. Frank P. Mabee of Detroit and Dr. F. W. Hartman, Pathologist Henry Ford Hospital, Detroit, are around again each after several weeks in bed from fractured vertebræ.

The March meeting of the Jackson County Medical Society was held at the Hayes Hotel, Jackson, on March 18th, when Dr. Leo Bartinmeier of Detroit spoke on the subject Potential Pre-Psychotic Personalities.

Dr. Lawrence Reynolds of Detroit and Dr. P. M. Hickey, Professor of Roentgenology in the University of Michigan Medical School, have returned from a sojourn in Florida where they have been enjoying the sunshine.

Dr. O. L. Ricker of Cadillac, Michigan, was confined to bed. The cause of the illness was gastric hemorrhage from peptic ulcer. Dr. Ricker is Councillor of the Michigan State Medical Society representing the 9th District.

Wayne County Medical Society is sponsoring a course on Medical Economics. The lectures are given by well known attorneys, bankers and business men of Detroit. Dentists, nurses, office attendants and private secretaries were invited to attend the course.

The Fifty-Seventh Annual Meeting of the Northern Tri-State Medical Association met at Fort Wayne, Indiana, on April 8th. Michigan was represented on the program by Dr. Carl D. Camp of Ann Arbor. His subject was The Effect of Emotions on Secretions.

Is horseback riding attracting our golfing medicos? You will think so if you converse with J. Stuart Pritchard, M.D., of Battle Creek. Dr. Pritchard has enrolled 36 riders in the recently formed Battle Creek Riding Club. And "Pritch" used to be some golfer.

Dr. B. H. Larsson of Detroit has been promoted from Major to the rank of Lieutenant-Colonel of the Reserve Medical Corps. This appointment has been made upon the satisfactory completion of a course in study in discipline and the passing of an examination. The Journal extends its congratulations to our fellow member.

According to the Bulletin of the Genesee County Medical Society the report of the Health Department of the city of Flint from March 8 to March 22, 1930, shows the following: Chickenpox 46; Diphtheria 7; Erysipelas 1; Measles 16; Meningitis 2; Mumps 13; Pneumonia 11; Scarlet Fever 37; Smallpox 4; Tuberculosis 13; Whooping Cough 28.

Dr. L. D. McMillan, recently of Onaway, on January 1st joined the Marine Hospital at Buffalo. The staff has a rotating service, the doctor being at present mostly on the G. U. Onaway's population we understand has dwindled since the burning of the wheel works a year ago. Dr. Carpenter still holds the fort there.—*Northern Michigan Medical Bulletin.*

A sad calamity overtook certain members of the "younger" sex at Gaylord last October, when a previously eligible young bachelor ceased to exist as such. Dr. Gordon McKillop, the man behind the Gaylord Hospital at that time, took unto himself a wife and nurse, one Mychalyn Ambroski, R.N.

Some name, isn't it? But wait till you see the girl herself. Congratulations am a feeble word for it."
—*Northern Michigan Medical Bulletin.*

The regular meeting of the Washtenaw County Medical Society was held Thursday evening, March 20th, at the Allenel Hotel, Ann Arbor. The meeting was addressed by Dr. Max Ballin of Detroit on the subject Progress in Surgery of the Endocrine System. Among other things discussed at the meeting were the requirements for Fellowship in the American Medical Association.

The Genesee County Medical Society at Flint was addressed by Dr. Robert Noby of Detroit at its regular meeting on March 19th. The Genesee County Medical Society is active in securing subscriptions for the new History of Michigan Medicine which is edited by Flint's honored townsman Dr. C. B. Burr. A committee was appointed consisting of Dr. H. Randall, Dr. J. G. R. Manwaring and Dr. F. Miner.

During the month of April the physicians of the State of Michigan have been furnished ballots by the *Literary Digest* for the vote on prohibition. Each physician should take this opportunity to mark his ballot for strict enforcement, modification or repeal, as the case may be. It will be interesting to know how the medical profession of the State stands in regard to this important subject.

Clinical conferences are being held at the Herman Kiefer Hospital, Detroit, under the auspices of the Wayne County Medical Society; that on Infectious Diseases is given by Dr. Gordon, Physician-in-Chief of the Hospital, every Wednesday morning at ten o'clock. The clinical conference on Psychiatry is given each Saturday morning at ten o'clock at the Receiving Hospital and is in charge of Dr. David Clark. These clinics are open to the medical profession of the State as well as the County of Wayne.

Dr. B. H. Nichols of Cleveland, Ohio, addressed a joint meeting of the Detroit Roentgen Ray and Radium Society and the Detroit Urological Society on the evening of March 13th. His subject was The Use of Uroselectan in Pyelography. This is a method of making pyelograms by injecting the drug intravenously. The radiographic examination made at different intervals following the injection shows the kidney pelvis, ureter and bladder. This is a new method of pyelography which may supplant the method of injecting the ureters with solutions of opaque salts such as sodium bromide.

A large crowd attended the lecture by Dr. Winnett Orr of Lincoln, Nebraska, it being the second lecture given by the Detroit Orthopædic Foundation in the Auditorium of the Wayne County Medical Society on the evening of March 25th. This lecture Foundation is under the management of the Beaumont Foundation Committee. Both Dr. Orr's lecture and those given a few weeks ago by Dr. T. Wingate Todd will be published in a few months and thereby be available to the medical profession of the State.

Beginning this year the American Association for the Study of Goiter will award a cash prize of $300 annually for the best original thesis dealing with some phase of the goiter problem. Theses should be submitted by June 1, to Dr. Walter M. Simpson, Chairman of the Essay Committee, Miami Valley Hospital, Dayton, Ohio. The award will be given immediately following the coming meeting of the Association which is to be held in Seattle, Washington, July 10-12, 1930.

The Detroit Medical Club was addressed at its regular meeting on March 20 by Professor Hussey of the Department of Geology of the University of Michigan. The subject of Dr. Hussey's address was Pre-Historic Remains as Found in America. The Club was out in full force and manifested great interest in a non-medical subject. On March 29 they held a dinner at the Detroit Club which was addressed by Dr. Hugh Cumming, Surgeon-General of the United States Health Service.

Dr. S. W. Donaldson, Roentgenologist of St. Joseph's Mercy Hospital, Ann Arbor, Michigan, has kindly consented to prepare a paper on the subject of "X-Ray in Court" which will appear in a future number of the Journal of the Michigan State Medical Society. Considering the large number of cases involving personal injury either industrial or accident outside of factories, the X-ray looms large as a factor in court testimony. Dr. Donaldson's article will be prepared with the utmost care. It should be read by all members of the medical profession and legal profession as well.

The Scientific Award Committee of the Phi Lambda Kappa National Fraternity has recently awarded a gold medal and cash price to Maurice M. Silverman of the Senior Class of the Detroit College of Medicine and Surgery for the best under-graduate thesis offered in this year's annual contest. The subject of the thesis was "Malformations" and was the same thesis written for graduation credit in the course of pathology. The prize is open to students of all Class A colleges in the United States. This is the second time in three years that the medals and prizes have been won by students of the Detroit College of Medicine and Surgery.

"The March issue of The Journal of the Michigan State Medical Society was one of the most interesting editions of this valuable periodical. The Journal fairly oozes with information and camaraderie. It reflects a sincere effort to organize medical men into an educative and friendly unit, all working together for better public health. Michigan can well be proud of its medical journal. It is instructive and has in addition that intangible quality of warmth. Read it and find how true is this statement."—*Bulletin of the Wayne County Medical Society.*

Thank you. We are just human enough to appreciate such a sentiment as expressed by our Wayne County contemporary.

The United States Marine Hospital, which has been completed, was dedicated on the 29th of March on the reservation of the Old Windmill Pointe light house at the junction of Fox Creek with the Detroit River. The new structure, made possible by an appropriation by congress, cost approximately $600,000. It is of one-hundred and thirty-five bed capacity. It supersedes the old building which was erected in 1855 on Jefferson Avenue. The following officials took part in the dedicatory program: Ferry K. Heath, assistant secretary of the treasury; Dr. Hugh Cumming, surgeon-general of the United States health service; Dr. Fred M. Meader, of the Detroit department of health; Norman B. Conger, president of the Federal Business association;

George A. Marr, vice-president of the Lake Carriers' association; Luther Ellis, regional manager of the Veterans' Bureau; Charles A. Park, superintendent of lighthouses, and Representatives Robert H. Clancy and Clarence J. McLeod.

Dr. Francis R. Packard, a prominent otolaryngologist of Philadelphia, better known to the profession as medical historian and editor of the Annals of Medical History, addressed the Detroit Academy of Medicine on March 27 at a dinner held at the Detroit Club. About twenty-five guests were present, chiefly from Ann Arbor and Detroit. The subject of his address was "The Hunters, John and William, a Study in Contrasts." Dr. Packard, who is one of the two leading medical historians in America, the other being Fielding H. Garrison of Washington, presented one of the most interesting addresses ever delivered in Detroit. Afterwards he showed a number of lantern slide illustrations dealing with his subject. The Detroit Academy of Medicine is to be congratulated on this feature of its program.

The newest publication in Michigan, so far as we know, is the Bulletin of the Northern Michigan Medical Society issued from Central Lake. It is, "Published occasionally by the society of that name by ourselves, for ourselves, with profound gravity and decorum. This Bulletin will either be sustained by members bringing in ads, patronizing our advertisers (and telling 'em why), or it will be put out of its misery by those who don't. Just as you like." We leave our readers to guess who the editor is. We wish to register our commendation and congratulations for this newsy little brochure giving the happenings of the counties of Antrim, Charlevoix, Emmet and Cheboygan. Page 14 contains a roster of physicians, who are enjoined by the editor to give their specialty. "All members retaining 'physician and surgeon' in the next issue will be fined three large potatoes or one squash."

The Medical Library once owned by the Wayne County Medical Society is now under the control of the Detroit Library Commission as the Medical Science Department. We have procured the following statistics which will be of interest to the members of the Michigan State Medical Society living in Wayne County. The library was used the year July 1, 1928, to July 1, 1929, by 2,717 doctors. The total attendance for the same year, which included of course students and laity as well, amounted to 20,536. The total number of books circulated for the same period was 7,314; the number of physicians who used the library January and February of this present year was 487. It is estimated that approximately 500, or one-third the number of physicians, members of the Wayne County Medical Society, used the library sometime during the past five years. The number of volumes in the library on January 1, 1929, was 30,426; there are 299 current periodicals on file; 19 periodicals in French, 41 in German and 3 in Scandinavian.

The annual meeting of the Michigan Association of Industrial Physicians and Surgeons was held in Flint in the Hurley Hospital, Friday, April 25. The day's program comprised industrial clinics conducted by Dr. D. L. Treat, chief surgeon for the Buick Motor Company and Dr. L. H. Childs, chief surgeon for the Chevrolet Motor Company. At the luncheon hour there were short talks on "Health Education in Industry," by Dr. Guy L. Kiefer, State Health Commissioner, and on "Rehabilitation," by Mr. John J. Lee, Supervisor of Vocational Rehabilitation. Subjects presented for discussion in the afternoon were "Fractures from the Standpoint of the Industrial Physician," by Dr. C. E. Selby of Toledo; "The Relation of the Physician to Industry," by Dr. C. H. Collisi, Grand Rapids; and "Lame Backs," by Dr. F. C. Kidner, of Detroit. Following the Banquet at the Durant Hotel, Mr. L. J. Corey of Detroit spoke on "The Workmen's Compensation Law from the Standpoint of the Lawyer and Physician." Dr. C. S. Gorsline, Battle Creek, president of the association, presided at the meeting, which was well attended and marked a new era in the organization's progress. Items from the meeting will appear in early issues of the Journal.

Dr. L. A. Farnham was chosen mayor of the City of Pontiac at the organization meeting of the City Commission held Monday evening at the City Hall. Charles L. Rockwell, mayor for the past five years, was named mayor pro tem.

City Clerk Harry A. Maurer called the meeting to order, after which the commissioners proceeded to select the mayor and mayor pro tem by ballot. When the result was announced, Dr. Farnham took the mayor's chair and thanked the commissioners for the honor. In speaking of the long period of service of Commissioner Rockwell he said:

"It is too much of a burden for one man to bear indefinitely, especially when the burden is as heavy as it has been in the past few months. There are six other members of this body who could fill this place better than I can but if it is your wish that I undertake it I shall be glad to do so. I want to serve notice on you, however, that on account of my profession it will sometimes be impossible for me to attend every gathering the mayor is expected to attend and that I shall call on each one of you to help me out. Each member of this body is as fully competent to represent the city as I am."

Mayor Farnham presided during the remainder of the meeting. The new mayor has been a commissioner since April, 1924. His recent election was the third one. He and Charles L. Rockwell and Charles Gibford were returned to office by substantial majorities at the recent spring election.

A clinical meeting of the Detroit Academy of Surgery was held on Thursday, April 10, at 4:30 P. M. at the Receiving Hospital. The program was as follows: Dr. H. K. Shawan, Embolectomy; Dr. H. Wellington Yates, Malformations; Dr. William E. Keane, Bladder Injuries; Dr. A. D. LaFerte, Fractures; Dr. J. C. Kenning, X-ray Diagnosis of Welch Bacillus Infection; Drs. Leo Dretzka and E. S. Gurdjian, Peripheral Nerve Injuries. The evening session of the Academy was held at the Detroit Athletic Club when papers were presented by Dr. Walter Hackett, Report on Spinal Anesthesia, and Dr. Nathaniel Gates, Duodenal Stasis. A very interesting feature of the evening program was an illustrated address, by the President of the Academy, Dr. Roy D. McClure, entitled "Kettering in the Galapagos Islands," which was a moving picture show lasting about two hours, illustrating the experiences of Mr. Kettering and Dr. McClure and company on Mr. Kettering's yacht. The Galapagos Islands were made famous first through Darwin's visit on the voyage of the Beagle in 1831 and more recently by Dr. William Beebe, who has written a very interesting book on his experiences in the Galapagos. To one who has read Darwin's voyage of the Beagle and Beebe's work on the Galapagos the illustrated lecture which was participated in both by Dr. McClure and Mr. Kettering was a most interesting experience.

DEATHS

Dr. William J. Kay

As this Journal goes to press word has been received of the death of Dr. William J. Kay of Lapeer, Michigan, Superintendent of the Michigan Home and Training School of Lapeer. His death occurred at 12:30 A. M., April 16th. Dr. Kay was 63 years of age. He is survived by his wife and one daughter, Elaine, and two grandchildren, as well as two brothers, Frederick B. Kay, Postmaster of Lapeer, and George Kay of Baltimore, Maryland, and one sister, Mrs. Louis C. Cramptom, of Washington, D. C. An appreciation of Dr. Kay's life and career will appear in the June number of the Michigan State Medical Society Journal.

OUR DAILY BREAD

During the last two decades there has been a running debate in this country and abroad with respect to the nutritive merits of bread made from so-called whole-wheat flour and of bread prepared from milled wheat in the form commonly known as white flour. Certain significant features of the controversy deserve emphasis at the outset. "White bread" has established itself as a staple constituent of the American dietary. Despite persistent propaganda against the familiar daily loaf, its popularity cannot truthfully be said to have waned except so far as there has been a general decrease in the consumption of all cereal breads as a characteristic incident of our growing national prosperity. Cereals represent the cheapest sources of energy for man. In times of stress they are depended on to furnish most of his calories. But when great economies are no longer necessary there is a universal tendency to include more foods from other and more expensive sources—meats, poultry, fish, milk, vegetables and fruits—in the human dietary. Furthermore, the nutritive quality of much of the white bread has gradually undergone improvement through the incorporation of larger quantities of milk in the loaf. "Milk bread" seems to be gaining in popularity; its comparative superiority over the older type has been demonstrated by actual experiment. Milling processes have been adapted to the production of the "refined" flours which have superior keeping properties, so that the welfare of a large industry is involved in proposed innovations.

The advocates of the use of "whole wheat" correctly refer to the chemical advantages of this food product. It contains more of the bran with its constituent proteins and salts, together with a slight increment of vitamins B and G. Cereals are not to be looked on as the dominant source of vitamins in any event, so that the comparison of wheat in different degrees of milling extraction seems somewhat gratuitous. The branny coats are admittedly resistant to digestion; witness the use of bran as a laxative. One may well argue, therefore, that any inherent chemical advantages in the richer content of protein in whole wheat are offset in some degree at least by its poorer utilization. The choice may therefore well be left to individual preferences and tastes.

These arguments are familiar to every student of nutrition and to most physicians. They would scarcely deserve reiteration here except for the insidiousness of some of the propaganda on the subject. White bread is sometimes referred to by the protagonists of whole wheat products as a deadly menace to mankind—as though men were accustomed to "live by bread alone." It has been linked with cancer by the most unscrupulous of the promoters. What food has not been charged with complicity in the genesis of this dreaded malady? White bread has been charged with responsibility for other ills to which flesh is heir. The opponents are sometimes swayed by a frenzy of belief; often they are merely profiteers in a cult; sometimes they are well reasoning advocates of whole cereal. Yet even during the stress of war-time needs the U. S. Food Administration, under unselfish guidance, declined to foist the use of whole wheat on a patriotic American public.

It is interesting at this juncture to record the same conclusions of recent independent investigators of the problem in Great Britain:

> In advocating whole-meal bread for general use, whether in times of need or in times of plenty, it should be remembered that not only men but also women and children are concerned, and that all the experiments on which the arguments are based have been carried out on animals or adult males. Children are very intolerant of high cellulose diets, and, for some, brown bread is far too irritating, even if given with the idea of relieving constipation. Appetite is such an important factor in all digestive considerations that no one who dislikes a food of unproved value should be forced to eat it if can be avoided. In time of peace, of course, the grown-up population, if they have the choice, will never eat whole-meal bread unless they like it, no matter how specious the advertisement, but they may force their children to eat it in the belief that they are doing them good. One should, therefore, be cautious in advising whole-meal bread generally, and wait until careful unbiased experiments have been done on a sufficient number of men, women and children. Thus only can accurate conclusions be drawn.

The subject has been approached from a somewhat different angle by Abelin of Bern, who points out that, paradoxic as it may sound, the bread problem really is apart from bread and cannot be solved by means of bread. If we wished to avert all the dietary shortcomings of bread and produce an ideal loaf—one in which the proteins are nutritively ideal, the mineral ingredients are adequate and the vitamin content is satisfactory—the product would no longer be recognized as bread. It would probably be a dietary innovation that few persons would be willing to accept in their daily food. There are no perfect single foods. One food product makes up for the deficiencies of another. The secret of perfect nutrition and the lessons of the science of physiology are expressed in the dictum of a proper choice of more than one food. Bread of any sort needs to be supplemented suitably in the modern diet.—Journal A. M. A.

SOCIETY ACTIVITY

Revealing Achievements and Recording Service

Frederick C. Warnshuis, M. D.
Secretary Michigan State Medical Society

PROGRAM IN POST-GRADUATE MEDICINE

June 2nd to June 21st, Detroit, Michigan

The Department of Post-Graduate Medicine of the University Medical School and The Michigan State Medical Society offer the following program in Medicine and Surgery for graduates.

MEDICINE AND SURGERY

Case History	1 hour
Constitution	1 hour
Clinical Pathology	1 hour
Physical Diagnosis	3 hours
Preventive Medicine	2 hours
Otolaryngology	2 hours
Clinical Pathological Conferences	3 hours

MEDICINE

Diseases of the Circulation	14 hours
Diseases of Metabolism	10 hours
Tuberculosis and other Diseases of the Lungs	7 hours
Syphilis	3 hours
Pediatrics	6 hours
Endocrinology	3 hours
Dermatology	3 hours
Infectious and Communicable Diseases	6 hours
Diseases of the Digestive Tract	8 hours
Neurology and Psychiatry	7 hours
Unclassified	4 hours

SURGERY

General Surgery	27 hours
Gynecology	10 hours
Obstetrics	4 hours
Proctology	6 hours
Surgery of Childhood	5 hours
Orthopedic Surgery, including Fractures	10 hours
Urology	6 hours
Thoracic Surgery	3 hours

The above teaching program consists of lectures and discussions in the mornings, while the afternoon hours will be devoted to Surgical and Medical Clinics in Harper, St. Mary's, Receiving, Herman Kiefer and Grace Hospitals.

For further information address the Department of Post-Graduate Medicine, University Hospital, Ann Arbor, Michigan.

WHY EVERY MEDICAL MAN IN MICHIGAN SHOULD ATTEND THE AMERICAN MEDICAL ASSOCIATION MEETING IN DETROIT

The reasons why every medical man in Michigan should attend the A. M. A. meeting are many, and should be convincing. In the first place no medical man can attend these meetings without learning something. He will learn something which will be of value to him in his practice. He will go back to his constituency better prepared to practice his profession. The section meetings of the American Medical Association are thoroughly scientific and up-to-date and instructive. It has been my good fortune to attend medical meetings in nearly every part of the civilized world. I know of no more progressive, scientific and valuable meetings than those of the different sections of the A. M. A. In each section one will hear the latest phases of the special subject discussed by men eminently qualified to do so. The only trouble is that there is an embarrassment of riches. There are so many good things going on at the same time that one is at a loss to know which way to turn. He sometimes finds himself much in the situation of the fabled ass who, finding that he was equidistant from abundant food on each side, starved to death before he could decide upon which way to go. The papers and the discussions in the different sections are certainly worth hearing, and possibly worth participating in. One may get valuable material himself and at the same time carry information to others.

Next in importance to the meetings of the sections, I would place the scientific exhibit. Here one finds the latest devices, the most important instruments of precision, every mechanical help in diagnosis, the latest chemical studies, all so arranged that he who runs may read. If the meetings of the A. M. A. did nothing else than bring together the wonderful and valuable scientific exhibits which have marked these meetings for the past few years, it would fill an important function and would justify every medical man in attending. There you will find the latest microscopes, microtomes, optical instruments, blood testing apparatus, in short everything which the doctor uses. One cannot afford to miss these demonstrations. Even when the exhibit does not directly concern one's special line of practice, he learns much which increases his value as a physician; he becomes a better man and a better practitioner.

Closely connected with the scientific exhibit one will find the display of new books, new journals, new monographs, everything new from the press which may be of benefit to the medical man. In this way one is able to keep himself in touch with the times, and the doctor who falls behind the times is soon irretrievably lost. No one finds this out quicker than his intelligent patients. The intelligent people of a community will appreciate the doctor's going to the meeting of the A. M. A. They will think he is likely to learn something there which will make him a more capable and efficient practitioner of medicine. The commercial exhibits are also of great interest. The medical man is never able to get entirely away from the manufacturers. He will see what the manufacturers of instruments and the manufacturers of medicines are doing. Besides these, there are displays of charts illustrating the work of preventive medicine, showing how this disease and that has been reduced, what measures have been taken, how to secure better water and better air. School hygiene is usually well illustrated and from these exhibits the doctor returns to his home with much which he may utilize in the prevention of disease. While credit for this comes slowly from the public, it is coming surely. No physician in Michigan can afford to miss the scientific sections, the scientific exhibits, the exhibits in preventive medicine work, even the commercial exhibits which will be at his service in Detroit in June.

There are many other reasons why the doctor should go to this meeting. He will meet with many friends, he will make many new friends, and from many of these he will learn more or less of value. He will see and hear men whose books and articles he has been reading for years, and in their presence he will be able to form a more just estimate of their real value. No one can live to himself alone; especially is this true of the practitioner of medicine. He cannot stand still intellectually. He either retrogrades or progresses, and in order to progress he must come in touch with the best that there is in the profession, and this he will find at the meeting of the American Medical Association.

There are still other important reasons

why every medical man in Michigan should attend the A. M. A. meeting. The intelligent people in your community expect you to do so. They demand that their doctor should be up to the times, that he should be among the best, and that he should not become fossilized. I have no doubt that there are other reasons why every medical man in Michigan should attend the American Medical Association meeting, but it seems to me that any one of the above given should be sufficient. Let Michigan turn out in toto. Let every one of the three thousand or more physicians in the state meet with his fellows in Detroit in June and be rejuvenated, refreshed and a better doctor when he returns to his home.

V. C. VAUGHAN, SR.

Secretary's Note: The above editorial written in 1916, when the American Medical Association met in Detroit, is very much to the point for the 1930 Detroit session of the A. M. A.

PRESIDENT BROOK ADVISES

The American Medical Association will hold its 1930 meeting in Detroit from June 23 to 27 inclusive.

Michigan men particularly should avail themselves of this opportunity to attend this great national Medical gathering because Detroit is easy of access over splendid roads or a few hours ride provided by excellent train service. It serves as a convenient stopover for those who expect to take an eastern or Canadian motor trip. Hotel accommodations are ample and no visitor to the convention need fear of being left to sleep on a park bench. A wise man, however, makes a reservation at the hotel of his choice and I would so advise every doctor expecting to attend. A list of hotels and their prices is published in this issue for your convenience.

The scientific exhibit is one of the outstanding features of the convention. Here may be seen, and explained by trained attendants, the latest advances in scientific medicine, embracing pathology, X-ray, laboratory diagnosis and treatment. If one so desires, his entire time may be spent with profit, inspecting the various exhibits presented. Physicians generally declare that at no other medical gathering is there such a variety of material brought together under one roof.

All of the meetings, as well as the Commercial Exhibit and the Scientific Exhibit, will be housed at the Masonic Temple. This arrangement will prove exceedingly convenient in view of the fact that one need not travel several blocks to hear a speaker at a different section meeting than the one in which he is most interested. Lunch may be obtained in the Masonic Building Cafeteria, obviating the necessity of leaving the building from arrival in morning until the day's program is finished. Each annual gathering also brings many class reunions, fraternity dinners, etc., which serve to bring together men who have since graduation been separated. Here is an opportunity to swap experiences and renew acquaintances.

Michigan doctors should begin to plan *now* to attend the most complete, scientific and instructive medical meeting ever put on anywhere in the world. The very latest and newest medical thought of the masters in the art and science of medicine and surgery will be dispensed for your edification and instruction. It will be a treat not only for the ocular and oral senses, but through them it will serve as a rejuvenation of the mental forces which have become weary through the long hours and days in administering to physical and mental needs of the public. It is a three months postgraduate course given in five days.

Not only can we acquire new knowledge from the presentation of the scientific discourses but my personal experience in attending these meetings has been that many valuable hints may be picked up through casual shop talk in the hotel lobby or on the street with men from various parts of the country.

Aside from the Convention features, Detroit offers a wide variety of interesting diversions. Belle Island, a most outstanding beauty spot of the country, offers a pleasing day's recreation. Various boat trips may be made by those who love the water. The New Ambassador bridge, automobile plants, various pharmaceutical houses and their biological plants—all may be visited and inspected with profit and pleasure.

Detroit committees are hard at work arranging every detail so that there need not be a dull moment for anyone during the entire week. Particularly are they endeavoring to put on most instructive clinics at the various hospitals, conducted by the greatest talent in the country.

Come to Detroit the last week of June

and stay the entire week. Treat yourself to the greatest medical feast conducted yearly by the American Medical Association and backed by the greatest body of Scientific men in the world.

J. D. BROOK.

ANNUAL MEETING SEPTEMBER 15-16-17

At a joint conference of the Executive Committee and section officers the date for our 1930 Annual Meeting was designated as September 15-16-17. The House of Delegates selected Benton Harbor as the place of meeting. Members desiring to participate in the scientific program should write to their section officers.

LEGISLATION

Did your Senator or Representative vote against the Basic Science bill and for the cult legislation at the last session of the legislature? If so, have you discussed the matter with him? Is he a candidate for re-election? The recommendation is made that each county society through the proper committee, and also the members individually, should interview these legislature members and so provide them with real facts. This local activity is essential. It should not be neglected.

MEDICAL-LEGAL DEFENSE REGULATIONS

In case a member is threatened with suit or suit is instituted, the following procedure should be observed:

Report all the facts to the medical-legal representative of your county society. Jointly send in a detailed report to Dr. F. B. Tibbals, Chairman, Kresge Building, Detroit. Do not delay making these reports. Send them the very day you learn of a threat or are served with a court notice. Do not engage or consult any attorney. Do not discuss the case with anyone. Do not attempt to make explanations. Withhold all comments, be firmly reticent and be guided by the instructions received from Dr. Tibbals, who will protect your interests and provide you with legal counsel.

These points are called to our members' attention and their observance stressed. Rigid compliance insures better protection.

REORGANIZED INGHAM COUNTY

So much notoriety and wide publicity was given the recent disbanding of the Ingham County Medical Society and the reorganization of a new society, that we believe a statement of the facts would do much to clear the many vague rumors and speculations that have been rife throughout the country. As long ago as 1926 certain members of our County Society felt a house cleaning was advisable; a few members, we believed, added no honor or dignity to our organization. It was common knowledge that grossly unethical and unprofessional conduct existed among us, though evidence enough to convict was hard to obtain. On one or more occasions evidence was gathered and hope of successful prosecution was high; witnesses, however, became strangely disinterested or their memories became poor.

The Koch Cancer Foundation had its followers and several cases of grossly unprofessional practices, and downright dishonesty were widely known. Specific cases were hard to prove, so expulsion of these certain offenders seemed a difficult step. Many conferences were held and finally it was decided to disband the Society, give up the charter, reorganize, leaving out of the new reorganization the undesirables.

Fifty or sixty members had been advised of this move and most of them had been in actual conferences on the matter. A meeting was called to disband the Society. The newspapers, sensing a story, rushed out to interview the officers. The secretary (evidently) first gave out the news that fee splitting was the burning question of the day and the cause of disbanding. Wide publicity was given this interview, making it appear that the Society was in a state of civil war over this question; many conjectures were made by the papers suggesting that two or even three Medical Societies might be formed. At the meeting the following day many of our members were highly indignant over what they termed misleading and totally erroneous publicity. These men expressed themselves rather heatedly on the subject

Information leading up to the cause of disbanding was not given out during the meeting. A motion was made and carried to appoint a committee to report on the advisability of disbanding. This committee

brought in a favorable report to disband two weeks later. The report was adopted by a vote of fifty-seven to fifteen. The Ingham County Medical Society then ceased to exist.

The publicity caused a great deal of loose talk, gossip if you prefer. Self appointed committees picked over the habits, practices, personalities, and characters of the entire profession of our County. The writer attended several of these meetings and raised a protest against the methods in use—proof was not required to eliminate a name from the eligibility list, a mere statement of leave him off or he's no good was sufficient. Fee splitters were named on vague hints and insinuations and in one instance, at least, a man was convicted because he had built a good surgical practice in a comparatively short time.

At this time the original issue was lost sight of and fee splitting and fee splitters was the topic of the day wherever physicians gathered. As one prominent surgeon after seeing a list of eligibles remarked, it seems only surgeons are fee splitters, they must be splitting among themselves and not with the referring physicians. One or two men openly remarked that an abortionist was as good as a fee splitter. During this whole period no one seemed to have the presence of mind to look up a definition of fee splitting as outlined by the A. M. A. They were too busy listening to the gossip about the other fellow.

The whole situation was so unhealthy and potentially dangerous that several men of unquestioned ability and character and who were acceptable to all of the committees refused to have any part in the proposed reorganization. Immediately following the disbanding of the old Society, a committee of fifteen men who had practiced in Ingham County from fifteen to thirty years was formed to reorganize a new Society. Care was taken in choosing this group. No man whose character or practices (fee splitting, etc.) had been doubted or even hinted at was allowed to serve. This committee met, formed, and temporary officers were elected and then proceeded on its plan of reorganization.

Two men who served on this committee and found it to be too conservative for them, quietly called a committee of their own choosing, held a meeting, and organized the Lansing Academy of Medicine. Twenty-four men whose average years of practice was under four years were invited to attend, a constitution and by-laws were adopted and officers elected and a charter was applied for. They then invited twenty to twenty-five more men to meet with them and subscribe to the constitution and by-laws, that they had no voice in helping to frame. Their letter of invitation stated that one of the unquestionable evils of medical practice was ignored by another proposed method of reorganization (meaning the committee referred to above and since this committee had made no report we felt this statement was premature). Many of the men invited to this meeting refused to go, not wishing to approve of the move by their presence. At this meeting seven physicians denounced the methods used by this group, the policies involved and the innuendos inferred in their general plans. This meeting was reported in the press as a forward step in medical organization in Ingham County.

The older committee continued its work and met two days later, inviting all the eligible members of the old society together with the newly organized Lansing Academy of Medicine to share in their deliberations. Constitution and by-laws were adopted and officers were elected. The committee on presenting the constitution and by-laws offered the following report:

Your committee has not been unmindful of the great responsibility placed upon them in drafting this constitution and by-laws. In writing this we have adhered closely to the model constitution as prepared by the A. M. A. Changes have been made to meet local conditions; we wish particularly to call your attention to that part of the by-laws that pertains to eligibility for membership. We have defined fee splitting and what constitutes fee splitters and what is not fee splitting. These definitions have been taken from the transactions of the House of Delegates of the A. M. A. There may be those among us who will say that this is not enough; to them we will say that we believe that we have gone farther than any County Society in the State—farther, in fact, than the Michigan State Medical Society and the A. M. A. demand. And since we are to be a component part of those societies we must be governed by their rules, practices and laws. The ideals, pledges, and usages of other organizations of whatsoever character we believe are not

required or even wanted by our State and National Societies. We believe they want as many good honest physicians in every community who will adhere to the high ethical and professional standard as outlined in this constitution and by-laws.

In presenting this for your approval we offer the best thought of our group, hoping that after its adoption the atmosphere may be cleared of the fog that has surrounded us during the past several weeks and that we may again raise our heads to receive the respect of this community, to which a harmonious, united, medical profession is entitled.

The Medical Society of Ingham County then invited Dr. B. F. Green, Councilor, to meet with us and his help was asked in securing a charter. At this meeting the Secretary of the Lansing Academy of Medicine announced the disbanding of the organization and the coöperation of its members, only, however, after taking credit for the strict wording of the constitution which they had no part in framing.

Looking back over the whole sad affair one cannot fail to see the cause of the scandal, overzealous, inexperienced men who rushed into print on every occasion possible, leading the public to believe that there were those among us who would suggest and insist upon operating on everyone who had one hundred and fifty dollars whether or not surgery was indicated. This, of course, is a slander of the profession of this County and State.

Some good may come from it as the men of judgment are determined that they shall keep such close watch on the affairs and policies of the Society that nothing like this disgraceful, untruthful, and wholly unwarranted event will ever occur again.

L. G. CHRISTIAN, President.

The Ingham County Medical Society is a thing of the past. This Society was disbanded by a vote of its members at a meeting early in March, following the recommendation of a committee which was appointed to investigate the feasibility of such an act.

For the past few years the Society had been rather inactive, many of its members were dissatisfied, and frequently remarked that the old Society was not exactly what it might be, and that we kept members in good standing whose practices and ethics were not worthy of protection.

In addition to this we did not seem to have an adopted constitution, members were serving on committees from year to year with dues unpaid, and the entire organization was in chaos.

During the preliminary meetings and impromptu discussions, which of necessity arose before disbanding could be accomplished, many opinions were expressed regarding illegal practices and fee splitting, but when the regular meeting of the Society took place, the motion to disband was carried, and we found ourselves without a local Society.

Several attempts were then made by selected groups to start reorganization on a proper basis. Outstanding of these groups was one of about twenty-two members, who met rather suddenly and perhaps somewhat secretly, paid in their dues, elected officers, pledged themselves on an absolute non-fee splitting basis, adopted a constitution and applied for a charter.

This action met with general disapproval by approximately sixty local doctors, including particularly the older members of the profession. These men, therefore, selected a committee, drew up a model constitution and by-laws, called a meeting of all the local doctors, adopted this constitution, elected officers and applied for a charter. The name of this organization is, "Medical Society of Ingham County."

About seventy doctors signed this new constitution, and following this action the Secretary of the previously formed "Lansing Academy of Medicine" read the following announcement:

At the time that the Ingham County Medical Society was disbanded, there was a difference of opinion as to how far steps should be taken in raising standards of membership in the subsequent organization. The younger group felt that the fee-splitting issue should be squarely met, and for that purpose they banded themselves together, adopted a constitution and became known as the Lansing Academy of Medicine. The object in view at that time was that this organization should in a short time comprise practically all of the physicians in Ingham County. This group felt that some, if not many, of the acknowledged fee-splitters would welcome an opportunity to

abandon the practice and join this organization.

Last Thursday, a larger group of physicians met to organize the Medical Society of Ingham County, and at that time adopted a constitution which in a general way embodies the ideals which prompted the formation of the Lnasing Academy of Medicine. The Academy members at that meeting felt that at least those physicians who were responsible for the formation of the new organization would make a sincere effort in enforcing the provisions of that constitution.

The Academy members have no desire for a duplication of organizations which have the same purpose, and on the contrary are extremely desirous of a united, ethical profession. Because of the efforts of the Medical Society of Ingham County to raise the ethical standards of the profession and with the understanding and belief that the Society would conscientiously endeavor to enforce the provisions regarding unethical practice, the Lansing Academy of Medicine voted to recall its application for a charter, and also voted to disband in order that its members might give their undivided and whole-hearted support to the Medical Society of Ingham County.

As a result of this action we feel that we now have a real working organization. Interest in membership has been stimulated and individuals who felt that the local Society was not worth while have evidently come to realize that membership in such an organization is of prime importance and well worthy of their consideration.

Trusting this gives a rather accurate description of what has transpired in Ingham County, and assuring you of a wide awake organization which will be heard from later, I remain,

Sincerely yours,

C. F. DEVRIES, Secretary.

MINUTES OF THE EXECUTIVE COMMITTEE

The Executive Committee of the Michigan State Medical Society met in Grand Rapids at 6:00 P. M. on April 10, 1930.

Present: Chairman R. C. Stone, J. D. Bruce, B. R. Corbus, Henry Cook, Geo. L. Le Fevre, B. F. Green, President J. D. Brook, Secretary F. C. Warnshuis, and Chairman of the Legislative Committee John S. Sundwall.

Upon motion of Bruce-Corbus, the Secretary was directed to arrange with the publisher for 700 sets of a Medical History of Michigan.

Councilor Green reported upon the reorganization of the profession of Ingham County and upon his recommendation by motion of Le Fevre-Corbus, the Secretary was directed to issue a charter to the Medical Society of Ingham County.

The Secretary presented the question as to who shall preside at the complimentary dinner to be given to the officers of the House of Delegates of the American Medical Association. Upon motion of Cook-Bruce, the selection of the presiding officer was left to the President, Dr. Corbus and the Secretary.

Upon motion of Corbus-Bruce, the program for the Post Graduate Conference for the Second District was approved and financial expense to be assumed in accordance with the motion passed at the last meeting of the Executive Committee.

Upon motion of Corbus-Le Fevre, the Secretary was instructed to use discretionary judgment in the matter of suspending members for the non-payment of their dues for the current year.

Dr. Sundwall outlined the work that had been accomplished by the Legislative Committee. Some two hours were spent in the discussion of our legislative problems and upon motion of Corbus-Cook, the Secretary was directed to arrange for a special conference to be held at the Michigan Union in Ann Arbor on May 16th. The Secretary was further directed to call a special meeting of the Council of the Michigan State Medical Society to convene in Ann Arbor on the afternoon of May 15th.

The meeting adjourned at 10:30 P. M.

F. C. WARNSHUIS, Secretary.

INSURANCE REPORTS

A number of complaints have been made to the Chairman of the Civic and Industrial Relations Committee, Dr. Harrison S. Collisi, 1522 G. R. National Bank Bldg., Grand Rapids, Michigan, that certain Health and Accident Insurance Companies

are declining to honor statements rendered by physicians for filling out preliminary and final claim proofs.

The home office of every insurance company authorized by the Michigan State Insurance Department for the transaction of business has been notified of the action taken and a copy of the resolution, which was passed at the annual meeting in Jackson, September 17, 1929, mailed to them.

Physicians are urged by the committee to render a statement to the insurance company and attach it to each preliminary and final claim proof when filling these out for claimants. In case of a refusal to pay, it is recommended that physicians immediately notify the Chairman of this committee and decline to fill out further proofs of claim for insurance companies who continue to refuse payment for services rendered. In this way only, can satisfactory results be obtained.

It is expected that some of the insurance companies will soon issue policies providing for the payment of all fees to physicians for filling out preliminary and final reports.

H. I. C.

HAVE
YOU
SENT
YOUR
SUBSCRIPTION
for
a
MEDICAL
HISTORY
of
MICHIGAN?
DO
IT
TODAY.

COUNTY SOCIETIES

BARRY COUNTY MEDICAL SOCIETY

At the February meeting a paper was read by Dr. V. Eman on "Relation of Dental Infections to Systemic Diseases."

At the March meeting a paper was read by Dr. J. C. Foshee on "Gall-Bladder Diseases."

C. S. MCINTYRE, *Secretary.*

LENAWEE COUNTY

The March meeting of the Lenawee County Medical Society was held at the Adrian City Club on the evening of March 20. Dinner was served at 6:30 P. M. to nineteen members of the society and two visitors. Two other members came in later to the scientific part of the program.

After dinner we adjourned to the third floor, where we listened to an excellent presentation of the subject of "Borderline Abdominal Cases" by Dr. Frederick W. Coller, chief of the surgical staff of the University of Michigan. The speaker leaned distinctly toward the conservative medical treatment of many abdominal conditions where the pathology is not clear, or in such cases as chronic appendicitis which have never had an acute attack, mild gall-bladder infections, and peptic ulcer. This part of the talk was preceded by a plea for early diagnosis and early gastrectomy in gastric cancer.

After Dr. Coller's talk, we were treated to a surprise which the secretary had not provided in a talk very lucidly explaining the modern treatment of varicose veins as carried out at the University Hospital. This consists of injection of the veins according to a very simple technic by 50 per cent glucose and 30 per cent Sodium Chloride, or in some cases by 30 per cent Sodium Salicylate, with the patient constantly ambulant. Slides were used by both Dr. Coller and Dr. Maddock, who described the latter treatment.

Everyone felt that this was one of the evenings affording more common sense than the usual scientific discussion, and was accordingly more profitable.

C. H. WESTGATE, *Secretary.*

ST. CLAIR COUNTY

The regular bi-monthly meeting of the St. Clair County Medical Society was held March 18, 1930, at the Harrington Hotel. The St. Clair County Dental Society were our guests for dinner, and remained for the scientific program. Following the business meeting the Superintendents of the City and the Contagious Hospitals, as well as the nurses in training and graduates, also came to hear our speakers.

We were fortunate in having Dr. Guy Kiefer and Dr. Young of the State Board of Health, who gave talks on Preventive Medicine and a résumé of the work of the Biological Laboratories of the State.

Both talks were very interesting and those who heard them were given a very concise and clear exposition of what our State Health Department is doing for the people of Michigan, through their own medical advisors.

A good discussion followed and as a result it is safe to say that many of us know much more of the manufacture and methods of handling biological products than we did before.

Members from Yale, Capac, Marlette, Marysville and Marine City were in attendance.

HILLSDALE COUNTY

The regular meeting of the Hillsdale County Medical Society convened at the Orange Lantern Tea Room, Hillsdale, Tuesday, March 25, 1930, at 6:30 P. M.

The veterinary surgeons of the county were invited to join us and a number of physicians and veterinaries of Branch County were present; also Dr. C. H. Westgate of Morenci, Michigan. After an excellent dinner, the President, Dr. Poppen, called the meeting to order and introduced Professors Huddleston and Killam of Michigan State College, who addressed the joint meeting very interestingly and instructively on Malta fever, its prevalence, distribution, and the means, so far as known, of its prevention and control. Many questions were asked and answered.

After the discussion the Doctors were tendered a rising vote of thanks by the society. Dr. Fenton then read a paper on "The Prophylaxis and Treatment of Lobar Pneumonia."

General discussion.

It was moved, supported and carried, that Dr. Fenton's paper be tendered to the Journal of the Michigan State Medical Society for publication.

After this, under the head of miscellaneous business, the society voted to hold our meetings on the last Tuesday of each calendar month except July and August, during the year; and to invite our colleagues in nearby counties to join in the meetings.

Adjourned.

D. W. FENTON, *Secretary.*

MONROE COUNTY

Monroe County Medical Society has had good attendance at meetings so far this year. Programs have been varied and interesting.

On January 16 the society enjoyed films on gastro-intestinal action and the effect of drugs on it.

On February 20 Dr. John J. Corbett of Detroit gave an illustrated lecture on "The Treatment of Rectal Fistulæ." There was an interesting discussion of revision of the fee-bill.

March 20, Dr. Stuart Pritchard of Battle Creek spoke on "The Significance of Cough." Dr. Pritchard insisted on stopping at the end of twenty minutes, and the audience was loath to let him go at the end of that time.

FLORENCE AMES, M.D., *Secretary-Treasurer.*

GRAND TRAVERSE-LEELANAU COUNTY

The regular meeting of the Grand Traverse-Leelanau County Medical Society was held at the J. D. Munson Hospital on Tuesday, February 4, 1930, at 7:30 P. M.

The minutes of the January meeting were read and approved.

E. F. Sladek gave a report of his attendance at the Annual Conference of Secretaries.

Four reels of motion pictures, "The Surgical Treatment of Peptic Ulcer," were shown. These reels were shown by the compliments of the Davis and Geck Company. Dr. M. J. Holdsworth gave a very fine report on the post-operative treatment of gastric surgery.

A short reel showing Walter Hagen in action was also shown.

The meeting was adjourned after considerable general discussion.

E. F. SLADEK, *Secretary.*

MARCH MEETING

The regular meeting of the Grand Traverse-Leelanau County Medical Society was held at the J. D. Munson Hospital on Tuesday, March 4, 1930, at 7:30 P. M., with the following members present: Drs. Way, Hastings, M. Holdsworth, Minor, Sheets, Holliday, Gauntlett, Kyselka, Sladek, and Thirlby, with Dr. Evans as guest.

Minutes of the February meeting read and approved.

On motion, Gauntlett-Hastings, the president is to appoint a committee to investigate and buy a motion picture projector. Passed. This was done because of the interest shown in medical movies and because of the poor quality of available projectors. The president appointed E. F. Sladek and M. J. Holdsworth on this committee.

Three reels of the motion picture, "Indirect Inguinal Hernia," were then shown. Considerable discussion followed.

E. F. SLADEK, *Secretary.*

MANISTEE COUNTY

The Manistee County Medical Society met March 18 at Mercy Hospital and enjoyed a 6:30 dinner, following which Dr. S. C. Moore, Wexford County Health Officer, and Anna Marie Nelson, Wexford County Nurse, gave splendid talks. They described in detail the very complete Health Unit recently organized in Wexford County and explained its functions and its benefits.

Members of the committee locally known as the Cousins Fund Committee (Michigan State Child Health Fund) were present to hear Dr. Moore's address. Much interest was shown by the members of this committee and also by the members of the Dental and Medical profession present. An endeavor to establish a health unit in the county is on foot and the Medical Society goes on record as wholeheartedly approving the plan to install a County Nurse as the first step and nucleus for a more complete county unit.

When this has been accomplished this county is eligible for its share of the money being distributed by the Michigan Children's Health Fund (Cousins Fund).

JACKSON COUNTY

The February meeting of the Jackson County Medical Society was held Tuesday evening, February 18, 1930, at the Hayes Hotel. Dinner was served at 6:00 o'clock, following which President Cooley called the meeting to order.

The minutes of the previous meeting were approved as published in the Bulletin.

There was a general discussion by several members present of the smallpox situation and the various methods of handling vaccination. The general consensus of opinion was that the trouble lay in the lack of coöperation between the Health Department and the various members of the Medical Society. It was also brought out that the Health Officer has not been a member of the Medical Society for several years past.

In order to bring about closer coöperation between the Health Department and physicians in general, motion was made and seconded and passed unanimously as follows: That the Society give Dr. Town an honorary membership and a season ticket to all the scientific meetings for the year 1930. The Secretary was also instructed to write to Detroit and to Holland, Michigan, about their system of handling this situation.

President Cooley then turned the meeting over to the chairman for the day. Dr. Munro was absent from the city, so Dr. Riley acted in his place. Dr. Riley introduced as speaker Dr. J. D. Mathews of Detroit.

Dr. Mathews chose as his subject, "The Use of the Cautery in the Treatment of Accessible Cancer."

He gave a very interesting paper on the technic and results obtained by use of the cautery in these conditions. His talk was very much enjoyed by all those present. After some discussion on this subject the meeting adjourned.

Attendance forty-seven.

GRATIOT - ISABELLA - CLARE COUNTY

The March meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright House, Alma, Thursday, March 13. Eighteen members and two visitors had dinner together.

The minutes of the previous meeting were read and approved, after which President Mudge introduced Doctor R. C. Moehlig of Detroit, whose subject was "Endocrinology from a New Angle."

By using lantern slides and charts the Doctor took up the subject from an Embryologic angle, showing which glands and tissues are developed from the Ectoderm and which from the Mesoderm—then from this showing how these same tissues are influenced by the Hypo- or hypersecretion of the different glands. From a therapeutic standpoint the only one that can be influenced much is the thyroid.

Doctor Moehlig answered questions freely and there were many comments afterward to the effect that the Doctor made this a very interesting and practical meeting.

Meeting adjourned.

E. M. HIGHFIELD, *Secretary.*

KALAMAZOO ACADEMY OF MEDICINE

The regular meeting of the Kalamazoo Academy of Medicine was held February 18, 1930, in the Academy Rooms. About fifty members were present for dinner.

The meeting was called to order by the president, Dr. J. C. Maxwell.

The minutes of the January meeting as printed in the February Bulletin were approved.

There were no committees to report at this meeting.

Dr. A. W. Crane showed X-ray showing unusual findings in a patient with gall stones.

A letter from the Professional Underwriters Insurance Company was read. Dr. C. L. Bennett moved that this be laid on the table indefinitely. Seconded. Carried.

A letter from Dr. Warnshuis regarding the Medical History of Michigan, which will be published soon, was read. Dr. Jackson moved that the chair appoint two members to solicit orders. Seconded. Carried. (For the benefit of those who were not at the meeting this letter is reprinted in this Bulletin.)

Dr. Boys moved that the chair appoint a committee to draw up resolutions on the death of Dr. Beebe. Seconded. Carried. Dr. Maxwell appointed Drs. McNair, Boys and Crane on this committee.

Dr. Crum asked Dr. Rockwell to review his plans for immunization against diphtheria which he presented at the last meeting. In brief Dr. A. H. Rockwell's plan was to have each physician set aside certain hours or days when he will be willing to give the necessary injections for one dollar each. This corresponds to a plan which was adopted by the Wayne County Medical Society.

Dr. F. E. Andrews moved that we adopt this plan for an indefinite period. Seconded. Dr. Bennett wished to amend the motion to read $1.50 for each injection. Seconded. Not carried. Original motion carried.

Circular letters will be sent to the physicians by the City Health Department.

Miss Florence Fiske explained the new recommendation cards which have both the Red Cross and the Academy seal. It was moved by Dr. Collins that the Academy bear $4.00 of the expense incurred, that being approximately the extra cost for the official academy seal. Seconded. Discussed by Dr. Barrett. Motion carried.

Dr. John Alexander, Assistant Professor of Surgery in the University of Michigan Medical School, gave a very instructive discussion on the recent developments in chest surgery. The talk was well illustrated by lantern slides. This was discussed by Drs. Boys, Pritchard, Shackleton, Shepard, Jackson, Stryker, F. E. Andrews and Hanna.

Meeting adjourned.

OAKLAND COUNTY

The monthly meeting of the Oakland County Medical Society was held at the Pontiac City Hospital on Thursday, February 20, 1930, the meeting being held in conjunction with the regular Staff Meeting of the Hospital.

Following luncheon the meeting was called to order by Dr. E. V. Howlett, President of the Pontiac City Hospital Staff, who then called upon Dr. B. M. Mitchell, to transact the necessary business of the O. C. M. S.

A communication from the Riker Building was read offering the Society space in that building for library or club rooms at a nominal cost to the Society of $1.00 per year. It was moved by Dr. Robert Baker that the proposition of the offer of the Riker Building be referred to the Board of Directors. The motion was supported and carried.

It was moved by Dr. Howlett that the Oakland County Medical Society present a petition to the City Commission, requesting that the name of the Pontiac City Hospital be changed to the Pontiac General Hospital. The motion was supported by Dr. Fred Baker. Carried.

Dr. Howlett then resumed the chair and called upon Dr. F. A. Baker, Chairman of the Program Committee, to present the program.

The following papers were read:

"Multiple Neurofibromatosis," Doctors George A. Sherman and R. H. Baker.

"Traumatic Paralysis," Dr. Edward Howlett.

"Toxemia of Pregnancy," Dr. H. A. St. John.

"Prostatic Hypertrophy," Dr. L. F. Cobb.

BAY COUNTY

The speakers thus far this year have provided very unusual programs of interest. They are as follows:

Dr. Harthur Keim, Detroit.
Dr. G. W. Gamble, Jr., Bay City.
Dr. C. E. Boys, Kalamazoo.
Dr. John Davis, Toledo.
Dr. John Alexander, Ann Arbor.
Dr. Cyrus C. Sturgis, Ann Arbor.

Friday evening, May 9, the Bay County Society will be host to an Inter-City meeting at Fisher's Hotel, Frankenmuth, Michigan, to hear Dr. George Crile, Cleveland. An old-fashioned chicken dinner will precede the meeting at 7 P. M.

L. FERNALD FOSTER, *Secretary.*

BERRIEN COUNTY

The Berrien County Society met in Niles on March 27 at the Four Flags Hotel. Entertainment for the dinner, which was attended by twenty-six members, was provided by the Niles doctors.

A short business meeting was held at which President McDermott announced the final committees for the state meeting to be held in Berrien County in September. The Secretary called attention to the request for subscriptions to the History

of the State Society and passed out the blank orders to be filled out and mailed to Dr. Warnshuis.

The first paper was a treatise on intestinal obstruction by Dr. Francis Greene of South Bend. Dr. Greene was a former Cass County boy and following his fellowship at Mayo's located in South Bend, where he is practicing surgery. A very representative group of Cass County physicians was at the meeting to hear his paper, which was well presented. The speaker stressed particularly early diagnosis and operation early, expressing the dictum "better unnecessary than too late." Also the advantages of spinal anesthesia in such cases, and the drainage of the obstructed bowel by the stripping and trocar method of removal of toxic fluid. The value of hypertonic saline to combat toxemia and shock. His paper was well received and the discussion which followed was quite valuable. Dr. A. J. Giradona, pathologist of Epworth Hospital in South Bend, gave a concise discussion of the paper from the pathologist's viewpoint, the ultimate diagnostician, in so many of these cases.

Dr. Giradona is always an interesting discussant and his ability at summarizing brought out many important features of Dr. Greene's paper.

Several case reports of obstruction were brought into the discussion by the other members of the Society which proved to be extremely interesting.

Dr. N. A. Herring, of Niles, gave a short talk on the findings of Drs. Coffee and Humbert in their recently brought out treatment for cancer. Dr. Herring chanced to be visiting in California at the time and had the good fortune to be present at the clinics and demonstrations of these cases. His description of the character of these men, and the incidents leading up to the widespread newspaper publicity, and the Fishbein repudiation were very interesting. Dr. Herring feels that the demonstrations, while not conclusive, showed some decidedly specific results in the relief of pain and the subsidence of tumor swellings, and he feels that these men should be given every encouragement in their work. The ethical difficulties under which they were laboring and the public interest makes their task stupendous.

The April meeting of the Berrien County Society will be held in St. Joseph at the Hotel Whitcomb on April 16. Dr. J. D. Brook, President of the State Society, and Dr. F. C. Warnshuis, Secretary, will be the essayists for the evening.

W. C. ELLET, *Secretary.*

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. L. J. HARRIS, President, Jackson, Mich.
MRS. J. EARL McINTYRE, Secretary, Lansing, Mich.

MICHIGAN STATE MEDICAL SOCIETY WOMAN'S AUXILIARY

At a meeting of the executive board of the Woman's Auxiliary Michigan State Medical Society held a few weeks ago Mrs. Harris, president, appointed Mrs. Guy L. Kiefer, our past president, to act as State Organizer. Mrs. Harris is desirous of having as many new auxiliaries organized as possible before the national meeting at Detroit in June. Pontiac, Oakland County, has already invited Mrs. Kiefer to attend a dinner they are giving and at that time assist them to organize an auxiliary. Any other counties wishing to have Mrs. Kiefer assist them have only to write Mrs. Guy L. Kiefer, Hotel Olds, Lansing, and Mrs. Kiefer will be delighted to do everything in her power. It is the wish of Mrs. Harris to accompany Mrs. Kiefer on some of these trips so that she may become better acquainted with the doctors' wives throughout the state.

We hope that as many members as possible from the various county auxiliaries will attend all or as many meetings of the Woman's Auxiliary American Medical Association to be held in Detroit, starting June 23. It will be a fine opportunity to learn more of the aims and ideals of the auxiliary and also to meet the national leaders. It is an opportunity that we shall probably not enjoy again for some time.

At the medical meeting of the second counselor district comprising Ingham, Jackson and Hillsdale Counties, to be held at Lansing, Thursday, April 24, the members of the Woman's Auxiliary of Ingham County have signified their willingness to assist Dr. J. Earl McIntyre, Chairman of Registration and Reception Committee. Here is an opportunity to show just what we can do. The auxiliary will have charge of the registration and information desks.

ANNA HOWARD SHAW, M.D.

Feb. 14, 1930.

Dear "Auxiliary" Women:

This evening the Woman's Medical College of Pennsylvania is holding a great dinner in the ballroom of the Bellevue-Stratford Hotel in Philadelphia to raise funds for the extension and permanent support of their Anna Howard Shaw Department of Preventive Medicine, which was founded in 1926. Among the speakers at this dinner will be Mrs. Carrie Chapman Catt, long a co-worker of Doctor Shaw, and Mrs. Ruth Hanna McCormick, Congressman-at-large from Illinois.

Today is the anniversary of the birth of this great woman who spent much of her youth as a pioneer in the North-Michigan woods, and who was a student at Big Rapids high school and Albion College. Later she became known the world over as a most eloquent advocate of woman suffrage. She was the leader of the National Woman Suffrage Association when the vote was finally won. She was known also as a great temperance worker and a preacher of remarkable eloquence and power. But I wonder how many of you know that she had two warrants for her title of "Doctor," and that one of them she received from the Medical Department of Boston University.

This is how it came to pass: In 1880, Miss Shaw, having graduated from the Theological department of Boston University, the only woman in a class of forty-three, was assigned, as a licensed minister of the Methodist Church, to a parish on Cape Cod. She quickly was convinced that the

work she wanted to do among the poorer and more neglected of her flock could be much more effectively done if she knew how to help their bodies as well as their souls. So, back to the University she went, to take the full medical course, which was not so long then as now. Thus she became a real medical missionary—a pioneer in that field—finding her place in her own country instead of far over-seas.

This was the first phase of a dedication to public service which can almost be said to have had no bounds, but whose emphasis was along the line of toughest resistance—almost of obloquy in that day—the political emancipation of women.

The National League of Women Voters is just now preparing to celebrate its tenth birthday by the creation of a Memorial Fund to support and extent its future work. This fund is to be in commemoration of those women who have been of outstanding importance in securing justice and equal opportunity for women. I had the honor of suggesting to the Michigan State League of Women Voters that it present the name of Anna Howard Shaw as one of three women to be placed at the head of the National Roll of Honor about to be created at Washington. Our nomination has been confirmed, and the three names thus honored are: Susan B. Anthony, Anna Howard Shaw, Carrie Chapman Catt. Beneath these names will appear those of carefully-selected women from all parts of the United States who have devoted themselves wisely and wholeheartedly to advancing the cause of women.

No name could better deserve to be at the head of such a list than that of Doctor Anna Howard Shaw. The nation owes her gratitude (and we in Michigan can take pride) for much more than suffrage. After equal political rights were finally won—she had campaigned for the ratification of the Federal Woman Suffrage Amendment in every one of the forty-eight States—she sought to retire for a greatly needed rest. But almost immediately she was drafted by the Secretary of War, Newton D. Baker, to mobilize and lead the forces of American womanhood in the Women's Committee, Council of National Defense. To this great task she gave such ability, energy and enthusiasm that she was awarded the Distinguished Service Medal at the close of the War. But not even then could she be spared from service. Her death came in 1919 from pneumonia contracted while touring the country as the chief exponent of The League to Enforce Peace sponsored by former President Taft.

At Albion College we are to hold a great commemorative celebration in Doctor Shaw's honor on the evening of February 17. This afternoon the girls held a commemoration tea in beautiful Susanna Wesley Hall, in which we tried to call up the times and events when she was a student there more than fifty years ago. At Kalamazoo we held a somewhat similar service yesterday. So, yesterday, did the students of Ferris Institute in Big Rapids. Next July, at a great Homecoming Celebration of their first seventy-five years, Big Rapids will devote a day to the memory of Anna Howard Shaw, and I shall be permitted to speak of her in the beautiful new Methodist church on the site of the one which she used to attend, and where she first felt her call to preach.

At Paris, a few miles from Big Rapids (where is now the State Fish Hatchery), was once the little log cabin of the Shaws in which Anna and her mother and sisters carried on a difficult and adventurous life while father and brothers were fighting in that other Great War. Here in Paris they have a plan: It is to re-erect that same log cabin and re-create all its surroundings just as they were when Anna was a young girl and lived her brave life and dreamed her brave impossible dreams of world service—which all came true!

So, it seems to me suitable that the wonderful record of this life, including her little-known but lately honored services in the field of Medicine—should be brought now to the minds of Michigan women who are themselves trying to do something indirectly for the advance of the healing art.

Faithfully yours,
HARRIET BARTLETT CRANE.

WOMAN'S AUXILIARY TO THE BAY COUNTY MEDICAL SOCIETY

"The annual meeting of the Woman's Auxiliary to Bay County Medical Society was held on December 11, 1929, at the home of Mrs. A. W. Heric, our President.

After a delicious buffet supper the business meeting and election of officers was conducted by Mrs. Heric.

Mrs. Slattery, who was to inquire as to the need of the little children who are under the Sisters of Mercy care, reported as the little ones were under the age of two years, that stockings and romper materials were most needed. These she had purchased as gifts from our Auxiliary. Mrs. Heric in her pleasing manner thanked the ladies for the honor of being their first President and for their coöperation. She said that the Auxiliary will always be very dear to her and have her great interest.

The officers were elected as follows: President, Mrs. P. R. Urmston; vice president, Mrs. C. L. Hess; Secretary, Mrs. L. F. Foster, and treasurer, Mrs. M. R. Slattery. At the close of the election Mrs. Urmston took the chair. She told us how she had attended the State Meeting when the Auxiliary was formed and had come back to us and with the help of Mrs. Foster had organized the Auxiliary here. In closing Mrs. Urmston thanked the ladies for honoring her in electing her as President. The ladies gave Mrs. Heric a rising vote of thanks for her great efforts in making the Auxiliary a success for the past two years and also for her hospitality of the evening.

Meeting adjourned for a social hour.

The Bay County Auxiliary met February 24 at the home of Mrs. C. A. Stewart. Her home was prettily decorated with spring flowers. Following a lovely buffet supper Mrs. P. R. Urmston, President, conducted the regular business meeting. Several paid dues as this is the beginning of our year.

Mrs. V. L. Tupper, a member, was reported seriously burned. We hope she is getting along nicely.

After adjournment, a social hour at cards was held. Mrs. L. F. Foster, Mrs. E. S. Huckins and Mrs. A. D. Allen held honors.

Mrs. E. A. Wittwer has invited us to hold our next meeting at her home.

RUTH M. ALLEN,
Corresponding Secretary.

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I beseech you to partake of this reputation, by attending the meeting of the American Medical Association at Detroit June 23 to 27 next.

J. D. Brook, M.D.
President Michigan State Medical Society.

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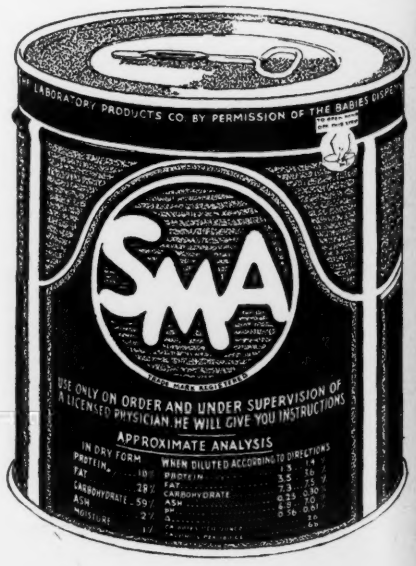

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